Making Married Adolescents Matter

Reproductive Health Needs, Interventions and Policies

21 August, 2008
Conference Hall No – 3,
India International Center, Annexe, New Delhi

Experience sharing workshop on

Making Married Adolescents Matter

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HMP

Govt. of Maharashtra
Health Services

Population Foundation of India

Workshop Organized by:

- **Institute of Health Management, Pachod, Maharashtra (IHMP);**
- **Directorate of Health Services (DHS), Maharashtra; and**
- **Population Foundation of India (PFI)**

Supported by
The John D and Catherine T MacArthur Foundation
Sir Dorabji Tata Trust (SDTT)

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[Pre-publication results, not for citing or reproducing at this stage]

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A. Background and objectives of the workshop

Adolescents as defined by World Health Organization (WHO) are young people between the ages of 10 and 19 years. At present there is no exclusive policy for adolescents and though this group does find mention in many policies and programmes such as the National Youth Policy, National Rural Health Mission/ Reproductive and Child Health II (NRHM/RCH II) the focus on married adolescent girls is limited.

Young people's health continues to be an area of need. According to the 2006 Population Reference Bureau (PRB) data, 30 percent of India's population belongs to the age group of 10-24 years. Various data sources portray information on the young people's health. According to NFHS-3 national level data, 45 percent of the women in the age group of 20-24 years were married before 18 years of age. The median age at first birth for women age 25-49 years is 19.8 years. Moreover, 16 percent of the women age 15-19 years were already mothers or pregnant by the time of the survey. The NFHS-3 data shows a marginal improvement in (i) young women getting married before 18 years of age, (ii) the median age of women at first birth, (iii) use of modern contraceptive methods among married young women, etc. The SRS data shows that 41 percent of all maternal deaths occur in the age of 15-24 years. The highest proportion of maternal deaths occurs in the age group of 20-24 years (29 percent).

According to the National Family Health Survey-3, 45 percent women (20-24 years) are married before 18 years in India. In rural Maharashtra, the prevalence of early marriage is 48.9 percent in rural and 28.9 percent in urban Maharashtra indicating the need to scale up the intervention not only in Maharashtra but in other parts

of the country where married adolescent girls are unable to access health information due to lack of awareness, or social, economic and cultural restrictions. The age specific fertility rate in 15-19 years age group is higher in Maharashtra than the all India rate. The early reproductive debut of married adolescent girls (MAGs) results in a host of adverse health outcomes.

The study on married adolescent girls, the Safe Adolescent Transition and Health Initiative (SATHI) (2003-2006) was conducted by Institute of Health Management, Pachod (IHMP), an NGO in Maharastra. SATHI is a model to increase reproductive health status of married adolescent girls through surveillance and support by trained CHWs, community ownership through Village Health Committees and back-up medical services. The intervention undertaken by IHMP indicates that age of marriage of adolescent girls went up and there was also a delay in the first conception when focused access to health information and services was made available. In turn, this reduced the percentage of low birth babies, post natal complications and reproductive morbidity. The SATHI model was aimed at delaying the age at first conception and averting the adverse consequences of early motherhood in married adolescent girls. The results indicated that a focused intervention for married adolescent girls has the potential of addressing four of the eight MDG goals. This study is of great relevance for all the socio-demographically backward states.

The Directorate of Health Services, Maharashtra is scaling up the SATHI model in the form of a Randomised Control Trial (RCT) in 10 of the most backward districts of the State in collaboration with the Institute of Health Management, Pachod. Simultaneously, five leading NGOs in Maharashtra are conducting multi-centric research on the SATHI intervention employing a quasi-experimental research design in collaboration with IHMP and PFI.

A one-day experience sharing workshop on **"Making Married Adolescents Matter - Needs, Interventions and Policies for Married Adolescents"** of the SATHI model was held on 21 August 2008 (Thursday), at the India International Centre, New Delhi. This workshop was jointly organized by Institute for Health Management, Pachod (IHMP); Directorate of Health Services (DHS), Maharastra and Population Foundation of India (PFI). This workshop included experiences of implementing the programme in the rural and urban areas of Aurangabad and Pune districts of Maharastra and the baseline findings of the RCT trial and the multi-site NGO research initiative. This event was jointly

organized by The Directorate of Health Services, Maharashtra, Institute of Health Management, Pachod (IHMP) and Population Foundation of India (PFI). This workshop was supported by John D. Catherine T. MacArthur Foundation and Sir Dorabji Tata Trust.

Objectives of the Workshop

The objective of the one-day workshop 'Making Married Adolescents Matter - Needs, Interventions and Policies for Married Adolescents' was to

- highlight the need for focused interventions and policies for married adolescents
- share the pilot along with its findings and learning
- share the evidence regarding the vulnerability of married adolescent girls from a study undertaken by the Directorate of Health Services and Institute for Health Management, Pachod in 10 districts of Maharashtra where there is high prevalence of early marriage.
- share the evidence regarding the early motherhood and its consequences from assessment in 5 districts of Maharahstra conducted through 5 NGO sites discuss the policy scenario and policy implications for married adolescent girls
- create an environment to recognize the importance of the issue and the need to address it

B. Proceedings

I - Inaugural Session:

a. Welcome and importance of the issue: Dr Kumudha Aruldas, additional director, Population Foundation of India (PFI)

Dr Kumudha Aruldas welcomed the participants on behalf of the organizers i.e. IHMP, DHS, Maharashtra and PFI; shared the importance of the issue and PFI's initiative to address the issue and its association with IHMP on this. In her welcome address she said,

"Many of us are working on adolescent health especially the adolescent girls. They are placed in different settings – in school, out of school, married and unmarried. Though there is enough evidence to say that the married adolescent girls are at a greater risk for maternal mortality and morbidity, still very little has been done to address this issue. Even though maternal mortality had decreased to 301 per 100,000 live births, it was still too high to be acceptable especially when evidence showed that married adolescent girls were at greater risk of maternal mortality. By the age of 18, nearly half the girls in India are married.

PFI since its inception in 1970 has been supporting programmes on Reproductive Health and other Population Issues and there has been increasing focus on adolescent reproductive and sexual health (ARSH) interventions. PFI has adopted various strategies to bring about a large impact of reproductive health programmes. One such strategy was to build the capacity of the NGOs in reproductive health with the support of the Ministry of Health and Family Welfare in 1990s. The response from the NGOs was so overwhelming that PFI then identified 13 Regional Training and Resource Development Centres mostly in the northern belt, also in the states like Karnataka and Maharashtra and trained over 3000 middle level functionaries from over a thousand NGOs. The association with IHMP also began then, as IHMP was one of the regional training centres in Maharashtra that trained 150 NGOs over a period of three years. Fifty of the 150 NGOs trained by IHMP were then given special training on ARSH.

She also mentioned about PFI's initiative to establish itself as a scaling up resource organization with financial support from Mac Arthur Foundation and technical support being provided by Management Systems International (MSI), a US based management

onsultancy firm. In its role as a scaling up resource rganization, PFI provides technical assistance and upport to NGO partners to identify and facilitate the caling up of successful/promising pilot projects in eproductive and Child Health (RCH) and Young eople's Reproductive and Sexual Health (YPRSH) in ndia. The Safe Adolescent Transition and Health nitiative (SATHI) implemented by IHMP is one of the ilots which PFI is supporting and facilitating the rocesses of scaling up.

The Directorate of Health Services, Maharashtra is scaling up the SATHI model in the form of a Randomised Control Trial in 10 of the most backward districts of the State in collaboration with the Institute of Health Management, Pachod. Simultaneously, five leading NGOs in Maharashtra (who received special training on ARSH by IHMP earlier) are conducting multi-centric research on the SATHI intervention employing a quasi-experimental research design in collaboration with IHMP and PFI being supported by Sir Dorabji Tata Trust. It is interesting to observe that all these efforts have come around the same time and it is this convergence that we are seeing today.

The aim of the dissemination workshop was to share information and evidence collected by IHMP about how focused interventions for married adolescent girls impacted health indices of not just the region but also the country. Also, experiences from the scaling up efforts of the SATHI model from the RCT implemented by Government of Mahrashtra and by five NGOs were shared. As an outcome, it was hoped that the workshop would be able to create an enabling environment to recognize the importance of the issue; and discuss on the need to address it.

b. Objective of the workshop and originating of the pilot: Dr Ashok Dyalchand, Director, IHMP

Dr. Ashok Dyalchand shared the objective of the workshop with the audience and addressed them by giving a brief background of the initiative undertaken by IHMP.

IHMP had gone through the process of evidence building and research to find out what married adolescent girls in Maharashtra needed. The pilot intervention was started in 2003 with the attempt to bring in evidence from different sources. In comparison to married women in the age group 20 years and above married girls of 19 years and younger face many more health problems. Not only were they more anaemic,

produced more low birth babies, higher maternal and neonatal mortality and had greater number of spontaneous abortions, they also suffered higher post abortion complications, reproductive tract infections and reported more domestic violence. As the national figures for maternal and infant mortality rates declined, there was a greater need for focused interventions to highlight vulnerable groups such as the married adolescent girls. To address this we need to plan and work with the most vulnerable group and married adolescent girls are amongst the most vulnerable group.

The broad objectives of the workshop were to build evidence regarding reproductive health needs of Married Adolescent Girls (MAGs). The more specific objectives of this workshop were:

- To disseminate risk, vulnerability & reproductive health needs of Married Adolescent Girls (MAGs)
- To share interventions tested for this target population and their efficacy
- To review policy gaps in ARSH

Various data sources used in the presentations include, i) Pre-Post test data Pilot Study (IHMP); ii) Baseline Survey - 20 PHCs in 10 Districts Randomized Control Trial (GoM); iii) Baseline Survey – 5 NGO sites in 5 Districts Quasi Experimental Research study and iv) NFHS 3 - sub set of data for married adolescent girls 15 – 19 years and married young women 20 – 24 years .

Organization of the workshop: In addition to the key findings from the pilot study by IHMP, the baseline findings from the randomized control trial conducted by the Maharashtra government at 20 primary health centres in 10 districts; and the initial findings of the

baseline survey from five NGO sites in five districts were presented. The key findings on prevalence and consequences of early conception on a sub set (married girls 15 – 19 years and married young women 20 – 24 years) from the National Family Health Survey-3 (NFHS-3) along with the review of policy gaps in ARSH were also discussed.

All the evidence collected from the various studies had clearly shown that if focused attention was given to married adolescent girls, the country could simultaneously address four of the millennium development goals (MDGs). These four goals are (i) promotion of gender equality and empowering women; (ii) reduction of child mortality; (iii) improving maternal health; and (iv) combating HIV/AIDS; malaria; and other diseases.

c. Opening Remarks

I) **Dr Prakash Doke**, Director, Health Services, Government of Maharashtra

The state government had the liberty for the first time to plan their health programmes and avail of the financial resources allocated by the National Rural Health Mission (NHRM). NRHM has become a flagship program in health in India. NRHM has three major goals which pertain to reduction in some indices like reduction in maternal mortality ratio, reduction in infant mortality rate and reduction in total fertility rate. All these three indicators are directly related to married adolescents, he said.

Though ARSH is an important component of NRHM, but it is primarily a need based clinical approach. Also, the convergence of reproductive and sexual health (RSH) with the HIV/AIDS programmes is not taking place in a satisfactory manner. As far as ARSH programmes are concerned, the easiest approach is to go to schools and reach out to the students. Many states have done this fo the HIV and AIDS programme by dovetailing it with th school life skills education course. If the states feel th need they could accordingly plan for it in thei programme implementation plans (PIP).

There is a need to address the problems of out of schoo girls as well. Except for Kerala, there is a very high dro out up to high school among girls in most states. Thi problem could be best addressed at the communit level instead of the school level. Though in Maharashtr many health indices are better than the nationa average, there are disparities within regions. I Maharashtra, there are several 'mini Keralas' lik Sindhudurg district. However, at the same time there ar areas within the state which had dismal education levels For example, Mumbai had a good education leve among adolescents, but the picture is totally differen just 100 kilometers away in tribal areas like Mokhla bloc of Thane. Districts like Gadchiroli and Nandurbar ha health indices far below the national average. Thes disparities could be addressed through focuse interventions.

The young individuals in the second decade of lif comprised one-fourth or 23 per cent of the tota population in the state. The age specific fertility rat among the age group 15-19 is very high (129/1000) This age group is highly fertile and at the same time the are at very high risk.

The maternal mortality ratio (MMR) is like a V-shape graph. It is high at a lower age, then declines and, agai rises with age. Infant mortality rate (IMR) has reduced i the state. While post neo-natal mortality has decline there has not been a significant dent on neo-nata mortality. Neonatal mortality is directly related to th adolescent pregnancy as children born to adolescen girls have less chance of survival. If we want to reduc IMR, we have to address the adolescent pregnancy.

Keeping all these factors in mind, the department o health services (Government of Maharashtra) decide to pilot a study to be implemented within the healt system, adapted and scaled up. The SATHI mode piloted by IHMP during 2003-06 showed promisin results towards addressing the above mentioned issue Hence, the DHS Maharashtra in partnership with IHM designed a randomized control trial (RCT) and piloted i in 10 backward districts of Maharashtra. The intention o this RCT is to study the poor performing districts i terms of what the contribution of married adolescen

irls is towards these three indices along with maternal norbidities. The two most backward regions in Maharashtra i.e. Marathwada region and tribal region re being selected for the RCT.

he investment in married girls pays rich dividends to heir future life and also to the next generation. Maharashtra government recognizes adolescent issues o be important and to address these it has started a few nitiatives. The scaling up of the SATHI model is one significant step in this direction. Depending on the results of this RCT, the DHS has plans to scale it up to the remaining districts of Maharashtra.

ii) **Ms Poonam Muttreja**, Country Director, MacArthur Foundation,

In India of the 110 million adolescent girls of age 10 to 19 years, 55 million fall in the 15-19 years and out of these 28 per cent are married. Also forty two per cent women between the age group of 20-24 years had given birth as teenagers.

There is a gap in addressing issues that affect young people's health in India, particularly, teen age marriages, pregnancies, health, nutrition, skill development, imparting knowledge on HIV/AIDS prevention. It is interesting to know that even though, the age at marriage in increasing in India, it is under the age of 19 that 45 percent of the marriages continue to take place. The age pyramid shows that in India, the adolescent population is growing in terms of absolute numbers as well as proportion of the total population. Thus, the married adolescent girls would continue to increase, making the need to reach them with the services all the more compelling.

In India there is a growing recognition to create a meaningful environment for change. Boys and young men also have to be engaged in initiatives that address issues related to gender relations; violence; sexuality and HIV and AIDS. The SATHI model piloted by IHMP addresses the married adolescent girls along with the young husbands which distinguished it from others.

With the objective of addressing the health risks of early marriage and child bearing, its programmes have focused on the particular needs of married adolescents—expanding their contraceptive choices; greater negotiation skills; higher mobility and encouraging couple communication. These aspects are rarely talked about as indicators for change. Scaling up these initiatives through existing government infrastructure holds a promise of change.

In India's conservative social and cultural settings, it is extremely difficult to reach out-of-school adolescent girls through programmes focused solely on sexual and reproductive health. The SATHI model has significant opportunity to address at least a cross section of their needs.

Young people's sexuality and reproductive rights are a relatively new area in India and specific policies are yet to be formulated through both RCH-2 and NRHM on married adolescents. The NRHM may review this model and consider SATHI model to address these issues and provide opportunities for scaling it up.

Globally population growth is rapid in countries where the women have their first child before the age of twenty years. Delaying the first birth not only reduces the maternal mortality and morbidity, but it will also impact the demographic transition positively.

iii) **Mr Amarjit Sinha**, Joint Secretary, Ministry of Health, Government of India:

This workshop discussed an issue which highlighted some of the failures in planning for the public health programme in the past. Although health was a state subject, there had been imposition of solutions rather than identification of the problem. It is easier to address a problem if there is identification and acceptance of the problem. That the girls are getting married early is well known to all of us. But whether we have accepted it as a problem and tried to address it or ignored it is more important. If the problem had been identified right in the beginning, then solutions could have been found earlier. Whether young people are dividend or disaster, that depends on how we care for them. While pilots and models are useful, it is very important to adopt scaling up as a "culture" for a large scale change.

It is very important to allow communities to decide that what they need. Health ultimately is a woman's well being issue; it is a gender relations issue and it is also a right. Every human being has a right to be healthy. Among the vulnerable groups, married adolescent girls are the most vulnerable from the perspective of schooling, security, societal norms or early marriages. Communities should be provided platforms to have an opportunity to understand their problems and seek solutions to it. The government should provide a functional platform at every level to enable and empower them.

Government of India had launched several new initiatives on the assumption that a functional public health system existed in the country. Perhaps the assumption was wrong as the public health centres were not been able to deliver the required services. The married girls would have received greater attention if these public health platforms were functional.

Every village must necessarily have a health, sanitation and nutrition committee under the Panchayati Raj Institutions. The participation of civil society groups was vital to ensure that communities had equal ownership in the sanitation and health committees as the elected representatives in the panchayat. The systems will deliver only if government is being held accountable for it.

Mr. Sinha revealed that an untied grant of Rs. 10,000 had been sanctioned to the village level committee and this would continue for the next 5-7 years. He said the government was ready to be held accountable if the people were being denied their rights. He said Orissa had one third of the total malaria cases in the country, but the people of the state didn't hold the heal directorate accountable. This was probably why it w not geared to address the problem. Ensuring th people's health was in their own hands could only b possible by holding government accountable for th services.

We have to build evidence in order to make a case. Th SATHI model is based on three important factor surveillance, behaviour change communication an primary level care; and for reaching out to all the thre aspects, communitization is the best approach. Ther are many such social issues at the communities' lev which are being addressed by small scale interventio like SATHI.

The community health worker (ASHA) programm which was initially implemented in 18 states had bee extended to the entire country. It is important to equi them with effective communication messages as it a not easy to bring about societal change by itself. Th issue of married adolescent girls could only b addressed by using a communitized approach. Th experiment done by IHMP is extremely relevant. ***If th SATHI model has the potential to work in other par of the country, government would be happy to sca up the intervention to the rest of the country, he said***

II. Scientific Sessions

Session-I: Chairperson – Dr. Saroj Pachauri, *Regiona Director, South and East Asia, Population Council*

In her introductory remarks, Dr Pachauri said that th workshop was centered on a very important issue tha has been neglected for many years. Till a decade ag 'adolescents' was a western concept with a sexu connotation. So, India didn't have any adolescent girls boys. Instead it had the 'girl child and from 'girl child' sh went straight to become a mother. Much water ha

assed under the bridge since then, she said and that is hy we were finally talking of married adolescents, i.e. irls who are married and suffering the consequences.

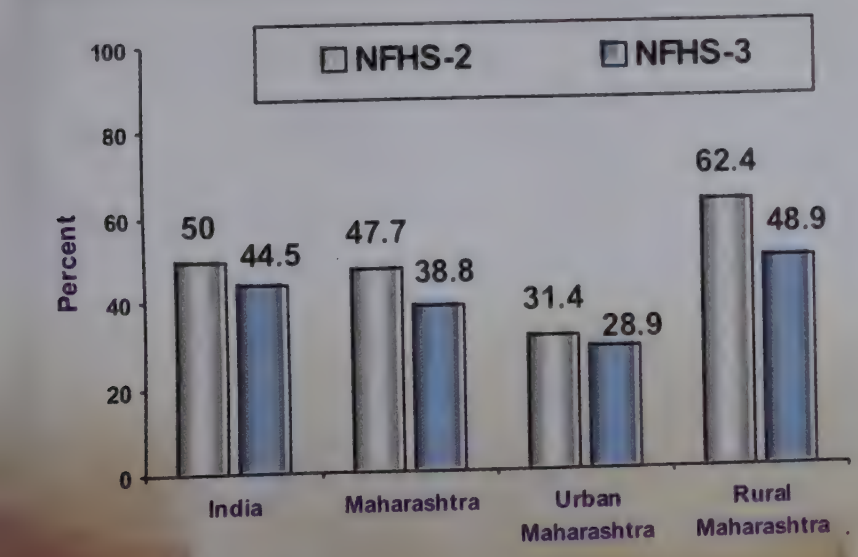
ndia has pioneered reproductive and child health (RCH) rogrammes. But there was no 'M' (mother) in RCH and ne repercussion was that maternal mortality remained igh, as maternal health was not being addressed, hough infant mortality declined to some extent. Yet eo-natal mortality and morbidity too had not declined s it should have, because health programmes always missed out the mother.

Now finally we are looking at the much-neglected, but coming-to-the-fore issue of married adolescents, particularly girls, who are most vulnerable due to early marriage.

a. First Presentation: Intervention Research on the Reproductive Health of Married Adolescent Girls - Results from the pilot study in Maharashtra (Enclosed in Annexure – I)

By Dr Manisha Khale, IHMP, Maharashtra

Dr. Manisha Khale shared that the rationale for conducting the intervention research was the high prevalence of early marriage among girls in the state. NFHS 3 showed that as many as 38.8 per cent of girls in Maharashtra are married before 18 years, with the figure being as high as 49 per cent in rural areas of the state.



To achieve a strategic thrust to improve these indicators, it was necessary to first identify the vulnerable groups and then design focused interventions. The intervention research involved a process of evidence-building in which the formative research took place in 2002, followed by the pilot intervention during 2003-06. This was followed by control group design in 2006 and then the ongoing multi-site randomized trials.

The objective of the pilot study was to test the efficacy of the intervention carried out to improve sexual and reproductive health of married adolescent girls.

Research questions

To study the impact of the intervention on

- the average age at first conception,
- contraceptive use,
- proportion of low birth weight babies,
- treatment-seeking for reproductive tract infections and
- treatment seeking for post-natal complications

The study was designed to cover 50 villages in a rural site and 27 slums in an urban location during 2003-06. The intervention was integrated with the ongoing RCH 2 programme.

Key components

1. Community based surveillance,
2. Behavioral change communication (BCC) for couples, families and the community and
3. Provision of primary level and referral services.

Village development committees were approached to help establish delayed marriage and conception as the social norm. The community based surveillance for the purpose of early detection and registration of pregnancy took place through community link workers who carried out monthly house-to-house surveillance for the detection of pregnancy before 12 weeks, self reported RTI symptoms, anaemia, abortion, and post-abortion or post-natal complications.

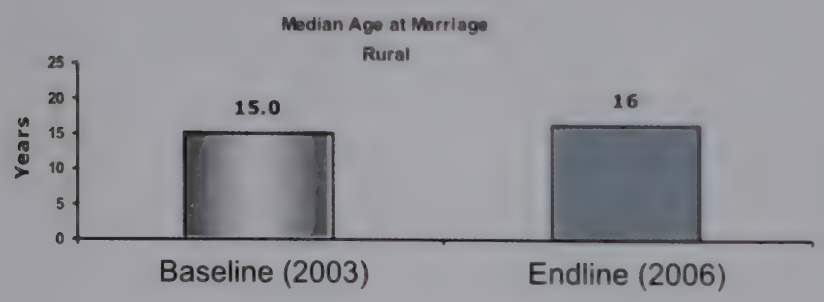
At the community level weekly meetings were held by peer educators. At the household level there were monthly meetings by the community health worker, while village-level group meetings with married girls and their spouses took place monthly with the

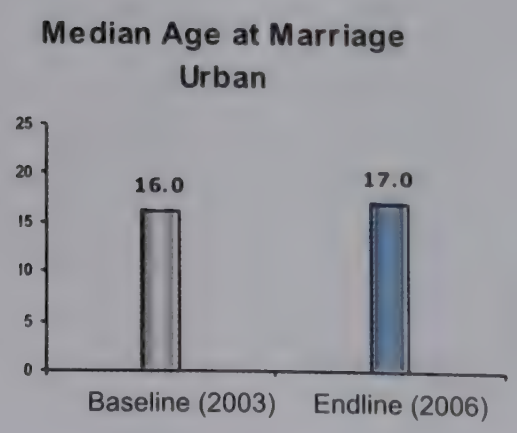
supervisor/ANM/MPW (male primary health worker) who also held primary level care couple workshops annually. Primary level care was provided by the community health worker who did surveillance detection and referrals, as well as by the ANM, the Primary Health Centre and the First Referral Unit.

The socio-demographic characteristics varied considerably at the urban and rural sites she said. While 71 per cent of married girls in urban areas had studied up to secondary school or higher, the figure was 26.7 per cent in rural areas. About 80 per cent of the married girls were working in rural areas but just about six per cent of them were working in the urban sites. Nearly 75 per cent and 90 per cent of married girls lived in a joint family in the urban and rural sites respectively.

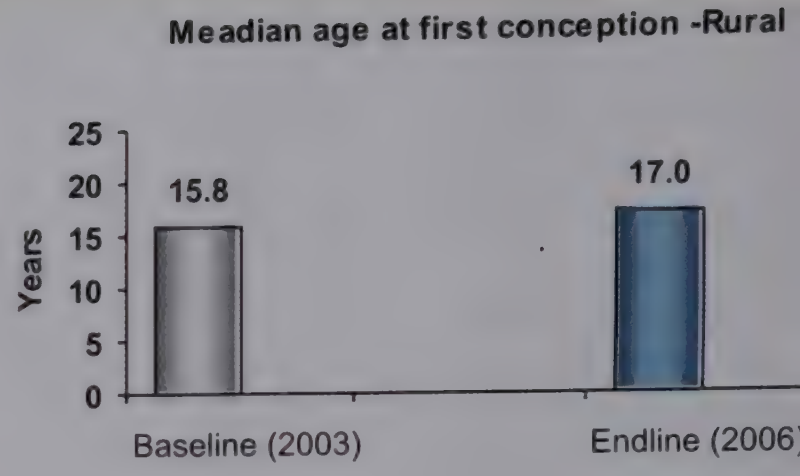
The outcomes of the project were very encouraging. It showed a delay in age at first conception, increased use of temporary contraceptives, reduced post-natal complications, reduced neonatal complications and decrease in low birth weight babies.

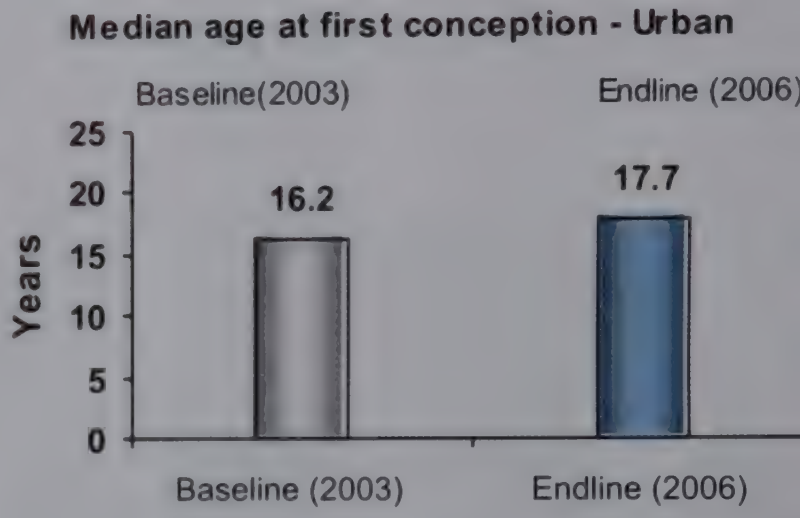
The median age at marriage was 15 in rural areas and 16 in urban areas at the baseline in 2003. The median age at first conception was 15.8 and 16.2 respectively in the rural and urban site in 2003.



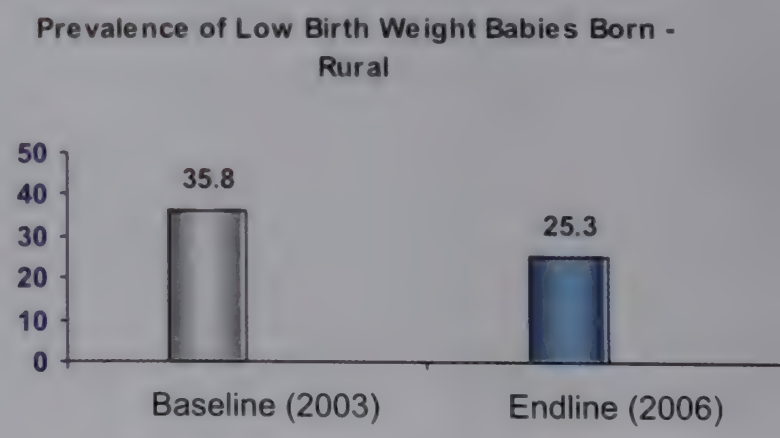


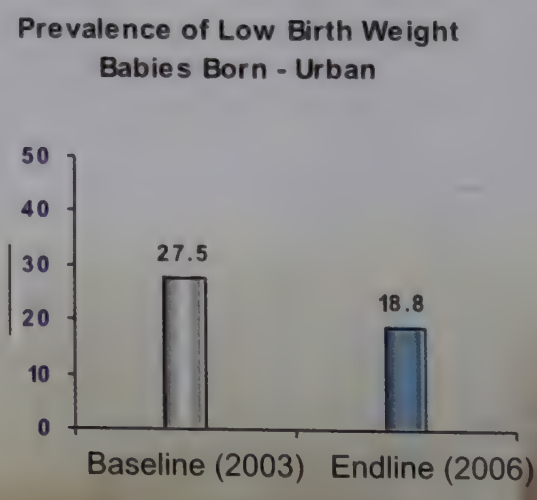
Specifically, the median age at marriage went up to 16 and 17 respectively in rural and urban areas by 2006. The median age at first conception too went up to 17 and 17.7 respectively at rural and urban sites. This was also expressed as an increase in the interval between marriage and first conception..





Contraceptive use increased significantly from baseli to end line - from 10.9 to 23.2 per cent at the rural s and from 8 per cent to 30.4 per cent at the urban site. T prevalence of the low birth weight babies born reduc significantly over a period of time.





When IHMP examined the reasons for these outcomes, they found that the high level of exposure to BCC by almost 50 per cent of the married girls contributed significantly. This participation was associated with high knowledge of reproductive health issues like diet and anaemia, abortion, family planning, menstrual hygiene, antenatal and post natal care and delaying first pregnancy. It also meant better couple communication and utilization of health services. Community based surveillance also led to early registration of pregnancy leading again to better service utilization and more positive outcomes for both mother and infant.

Thus, the key lessons were that surveillance led to early antenatal care registration and that couple and family communication influence the social norm of early conception. The targeted interventions managed to delay the age at first conception; increase the use of temporary contraceptives; reduce post-natal complications; reduce neonatal complications and decrease prevalence of low birth weight babies.

b. Second presentation: Evidence from the five NGO sites (Enclosed in Annexure – II)

By Lt Col Anil Paranjape, IHMP

Five leading NGOs in Maharashtra are conducting multi-centric research on the SATHI intervention employing a quasi-experimental research design in collaboration with IHMP and PFI being supported by Sir Dorabjee Tata Trust (SDTT). This presentation provided findings from the baseline assessment done in 2008 in the five districts of Maharashtra. The five NGOs implementing SATHI are Sanskruti Samvardhan Mandal in Nanded district, Gramin Vikas Mandal in Beed, Apeksha Homoeo Society in Amravati, Youth Welfare Association of India in Buldhana and Late Shriram Ahirrao Memorial Trust in Dhule. These five NGOs were selected through a systematic assessment done collectively by IHMP and PFI.

The research design for this trial is that of a quasi experimental study design. Each NGO site has a population of 20,000 or more. Control areas for this trial are selected as PHCs with similar socio-demographic characteristics to that of the intervention PHCs from the same district. Through systematic random sampling 200 married adolescent girls were selected from each site, 150 of them subsequently being interviewed. The findings presented here portray a collective scenario from the five districts.

Socio-Demographic Characteristics: This baseline survey shows that one fifth of these married adolescent girls were illiterate and 40 percent were housewives. 55 per cent of the husbands of married adolescent girls were labourers and 26 per cent were farmers. Seventy six per cent of married adolescents stayed in a joint family and 67 per cent were from the lower socio economic strata. Majority of them were Hindus (78 percent) and 62 percent reported to have low exposure to mass media.

Reproductive Health Status: The median age at marriage was 15 years and the age at first conception was 16.2 years. Almost half the married adolescent girls were undernourished and 67 per cent found to be anaemic. 55 percent respondents faced antenatal complications, 62 percent faced intranatal complications, 45 percent faced postnatal complications and 42 percent faced neonatal complications. 35 per cent of the adolescent mothers had low birth weight babies.

The abortion rate among the respondents was found to be 11.7 percent. Of them, 89 per cent had spontaneous abortions and 69 percent of the respondents experienced post abortion complications.18 percent of the respondents did not receive any treatment for post abortion complications. The prevalence of self reported reproductive morbidity shows that, among the married adolescent girls reproductive tract infections was 35 per cent; urinary tract infection was 24 percent and sexually transmitted infections was 4 percent. 72 percent of the respondents did not receive treatment for RTI. The domestic violence and non-consensual sex appear to be under reported with 18 percent and 20 percent respectively.

40 percent of the deliveries were conducted at home.

Only 25 percent of the respondents reported to have received treatment for antenatal complications during pregnancy and 44 percent did not receive any health services during postnatal complications. Contraceptive use was extremely low among married girls (8.9 per cent). Forty per cent deliveries were at home. Just 25 per cent married girls reported getting treatment for ante natal complications. The knowledge on reproductive health related issues is poor amongst the respondents. 80 percent of the respondents have heard about AIDS. However, only 11 per cent had ever had an HIV test.

c. Third Presentation: Analysis from the NFHS-III (2005-06), Maharshtra on currently married adolescent girls of 15-19 years age (Enclosed in Annexure – III)

By Ms Priti Bhat, IHMP

Analysis from the NFHS 3 data for married girls in the 15-19 age group of Maharashtra was presented. NFHS interviewed 9,034 women in Maharashtra of whom 4,448 were in rural areas. A sample size of 258 respondents was analyzed. The mean age of respondents was 17.7 years. Twenty two per cent were illiterate. Forty two per cent were housewives and eighty two per cent had not been exposed to the mass media. The mean age of the husbands was 25. 15 percent of the husbands were illiterate and 49 per cent were agricultural laborers.

Majority of the respondents were Hindus (88 percent) and 38 percent of the respondents belonged to scheduled caste and tribes. Twenty per cent had a low standard of living while nearly 40 per cent had a medium standard of living. The median age at marriage for the married adolescent girls was 15 years and first birth was 17 years. Fifty eight per cent of the married adolesce girls were found to be anaemic and 42 per ce undernourished. Morbidity burden on marri adolescent girls was found to be enormous. Thirty fi per cent married adolescent girls had experienced a antenatal complication; 12 percent had any post nat complications; and 8percent had abortions. Nearly 4 per cent had home deliveries and thirty nine perce respondents had low birth weight babies. Ninety p cent of the married adolescent girls were not using a contraceptives. Sixty eight per cent had knowledge HIV and AIDS, but just 1.3 per cent had actually had a HIV test.

Session II: Chairperson- Professor Ranjit Ro Chaudhury, Member, Governing Board, PFI

d. Fourth Presentation: A Randomized Control Tri (RCT) to test the efficacy of a community base intervention for married adolescents in Maharasht (Enclosed in Annexure – IV)

By Dr Dakure, Additional Director of Health Service Government of Maharashtra,

This presentation was on the inception and curre status of the randomized control trial by the directora of health services, Maharashtra in collaboration wit IHMP to test the efficacy of the community-base intervention for married adolescents in the state.

Maharashtra had a very large number of girls who a married before 18. He said 51 per cent of adolescer girls in the state suffered from malnutrition and th fertility rate among the state's 15-19 year olds wa higher than the all-India rate.

The objective of the trial is to assess the reproductiv health problems among married adolescents in ten hig risk districts of Maharashtra; to assess the impact of a

adolescent reproductive and sexual health intervention on the health of married adolescent girls through a randomized control field trial; and to develop an ARSH model for married adolescents in rural Maharashtra.

Selection of PHCs: Ten PHCs were selected by systematic random sampling, one from each district. Ten 'matched' PHCs were identified from the same district. The criteria for matching included population characteristics, performance of the PHC, reproductive and child health status and farthest distance from the randomly selected PHC. One PHC selected as the intervention site and another one as control site. Eight villages per PHC were selected, two each being large and medium while four were small (in population-size). Hundred married girls per PHC were selected. They were selected after conducting a complete census of the village, listing the married girls, systematic random sampling and sample proportionate to population size. A total of 1936 married girls were thus interviewed in the 20 PHCs.

Ten of the state's most backward districts were selected for the randomized control trial which started in 2007 and will end in 2010. The districts are Parbhani, Hingoli, Jalna, Nanded, Bid, Gadchiroli, Dhule, Nandurbar, Yavatmal and Buldana. The districts were selected from the state based on the selected criterion which includes high proportion girls married <=18 years; RCH-2 Composite index; and human development index, gender development index.

Selection of the respondents: Complete house listing of the villages was done and all married adolescent girls were listed. A sample proportionate to population size was selected by systematic random sampling procedure.

The RCT adapted the components of IHMP's pilot intervention 'SATHI'. These were – community based surveillance for early detection and registration; behavioural change communication which focuses on couples, families and communities; and primary level care and referral. There were multiple strategies for intervening at the household and community levels. At the household level a link worker or a community based worker such as an anganwadi worker helped in community based surveillance, early detection and referral, registration and BCC.

At the community level the supervisor or ANM carried out supervision, BCC, and antenatal and postnatal services. The PHC also operated at the community level by making available pregnancy detection kits, antenatal and postnatal care, post abortion care and controlling reproductive morbidity.

Intervention Strategies

Health Workers	Level	Strategies
Link Worker (community based) Anganwadi/ ASHA worker	House hold level	Community Based Surveillance, Registration, Early Detection & Referral, BCC
Supervisor /ANM	Community Level	Supervision, BCC, Antenatal & postnatal services
PHC	Community Level	Pregnancy detection kits, Antenatal & postnatal care, Post abortion care, Reproductive Morbidity

The key areas of focus of the RCT were:

- Delaying first conception
- Promotion of contraceptive use particularly prior to first conception
- Early registration of pregnancy, that is, before 12 weeks

- Treatment to prevent reproductive morbidity
- Low birth weight.

The challenges lay in adaptation of the pilot intervention to the government health system, the integration of the intervention with the ongoing RCH programme and prevention of contamination of the study area.

e. Fifth presentation: Evidence from Baseline Survey in 20 PHCs of 10 Districts in Maharashtra (Randomized Control Trial to Test Intervention for Married Adolescent Girls, 2007) *(Enclosed in Annexure – V)*

By Dr Arvind Menon, IHMP

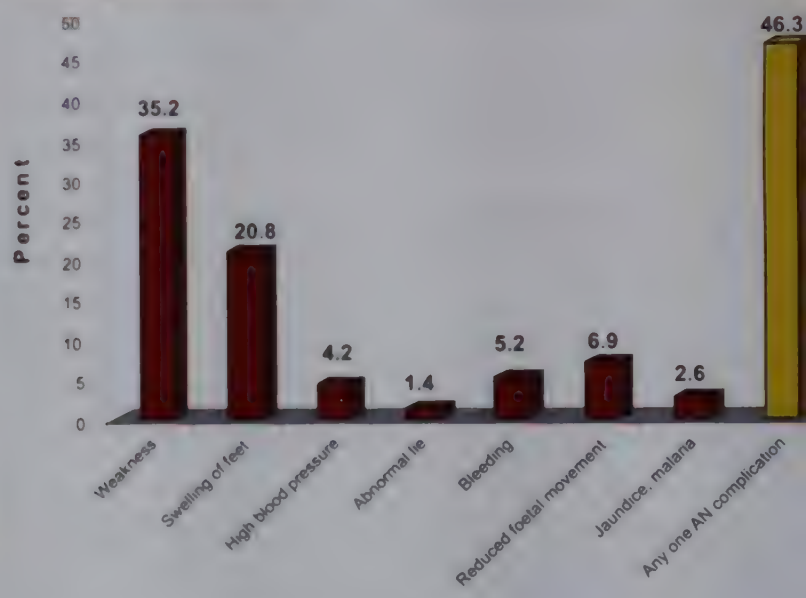
A baseline survey was done in the RCT in 2007. This presentation shows evidence from the baseline survey of married girls in the randomized control trial in 20 PHCs of 10 districts in Maharashtra. The purpose was to find out the extent of early motherhood and its consequences. The socio demographic characteristics, reproductive health and nutritional status as well as status of neo natals corresponded closely with data on married girls collected and presented earlier. However, a summary of the presentation is being presented here.

Socio-Demographic Characteristics: The mean age of married adolescent girls is 17.8 years where as, mean age for husband is 22.8 years. 22 perc of the married adolescent girls found to be illiterate against 14 percent of husbands who were illitera More than one fourth (25.6 percent) of the marr adolescent girls were found to be housewives.

84 percent of the married adolescent girls stay in jo families. 93 percent of the families are Hindu famil and 64 percent are from low socio-economic group.

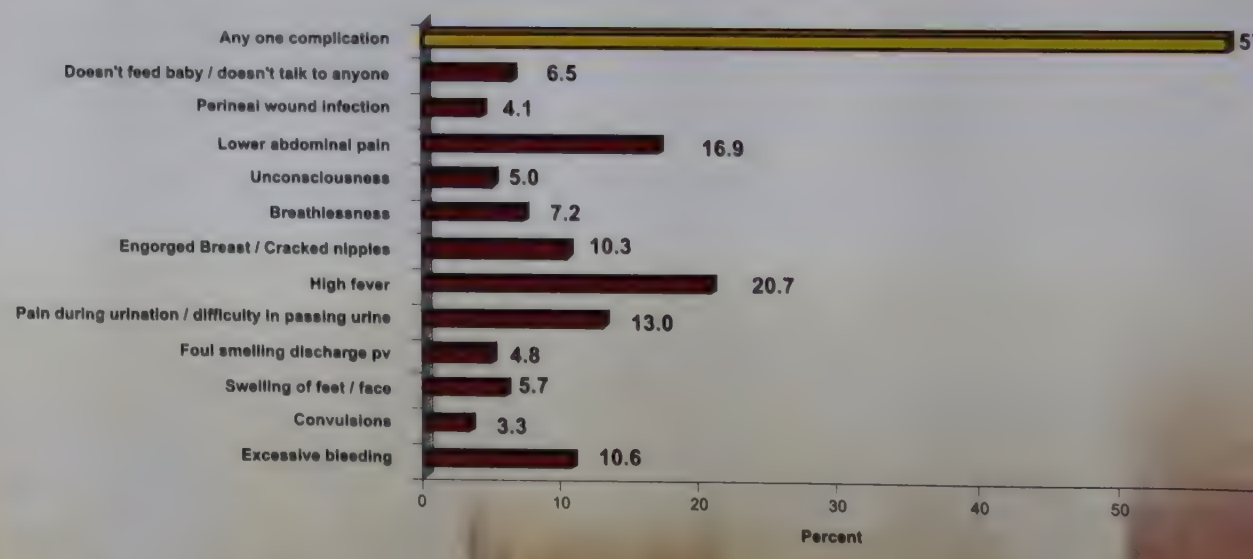
The median age of marriage for married adolescent g is 16 years and the age at first conception is 16.8 yea The prevalence of anemia among the marri adolescent girls is 55 percent.

Percent MAGs Reported Antenat Complications



46 percent of the married adolescent girls reported have at least one antenatal complication and 50 perc have reported to have any intra natal complications. those, who reported to have antenatal complications, percent experienced weakness and 21 percent h swelling of feet.

Percent MAGs Reported Postnat Complications

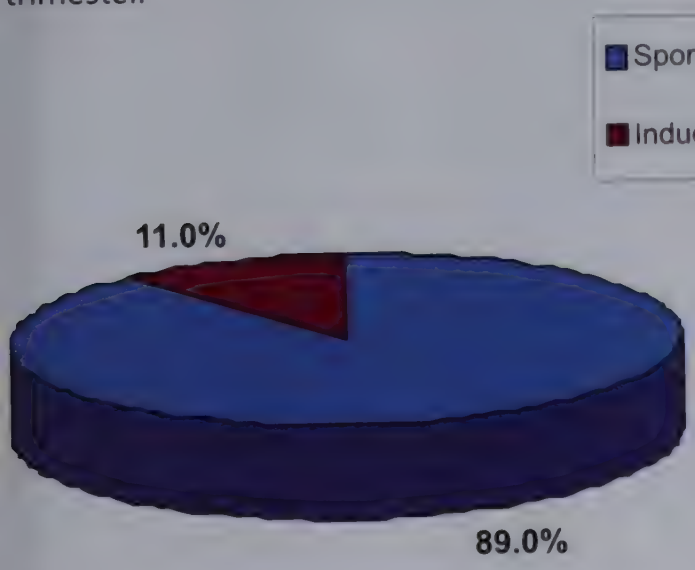


uring the baseline survey, it was found that 58 percent f the married adolescent girls had any one post natal omplication and 48 percent reported any neonatal omplications. This is worth mentioning here that, istory of maternal & neo natal health was taken only for ast delivery outcome as a live birth. 31 percent of the narried adolescent girls have reported to have low birth veight babies.

Pregnancy wastage : The pregnancy wastage details among the married adolescent girls are given below.

MAGs reported non-live births	%
Annual Abortion Rate (per 100 preg.)	7.8
Spontaneous Abortion Rate (per 100 preg.) Induced Abortion Rate (per 100 preg.)	7.0 0.8
Still Births (per 100 preg.)	1.7
Pregnancy wastage (per 100 preg.)	9.5

Types of Abortion in MAGs : Majority of the abortion occurred are spontaneous abortion and Majority spontaneous abortions in MAGs occur in the first trimester.



69 percent of the married adolescent girls who had abortion, reported to have post abortion complications out of which, 40 percent did not seek any treatment.

Reproductive Morbidity Summary

Variables	% (n=1936)	Range across districts
Prevalence of		
• Any one symptom of RTIs	33.5	21.7-49.8
• Any one symptom of UTIs	16.5	11.6-22.8
• Any one symptom of STIs	3.1	1.5-5.1

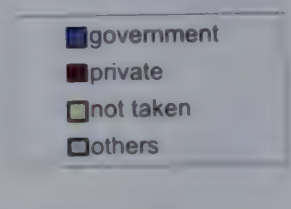
8 percent of the MAGs reported about domestic violence (Physical violence by spouse in last one year) and 10 percent reported to have non consensual sex.

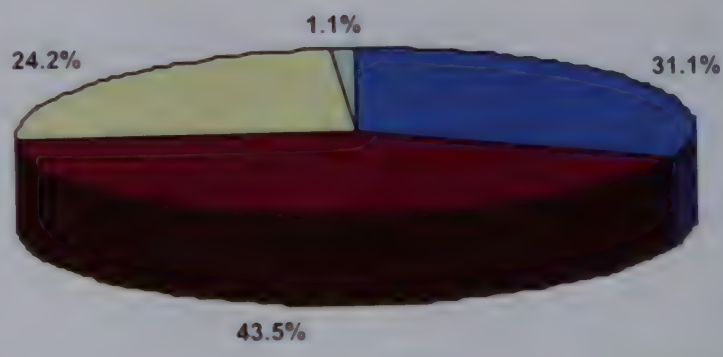
Use of contraceptives found to be very low among the MAGswith only 3 percent reported to have ever used it and 2 percent found to be current users (among non pregnant MAGs).

52 percent of the deliveries among the MAGs are still being conducted at home. 33 percent of the MAGs did not seek treatment for the antenatal complications whereas, 39 percent used private health facilities and 28 percent used government health facilities.

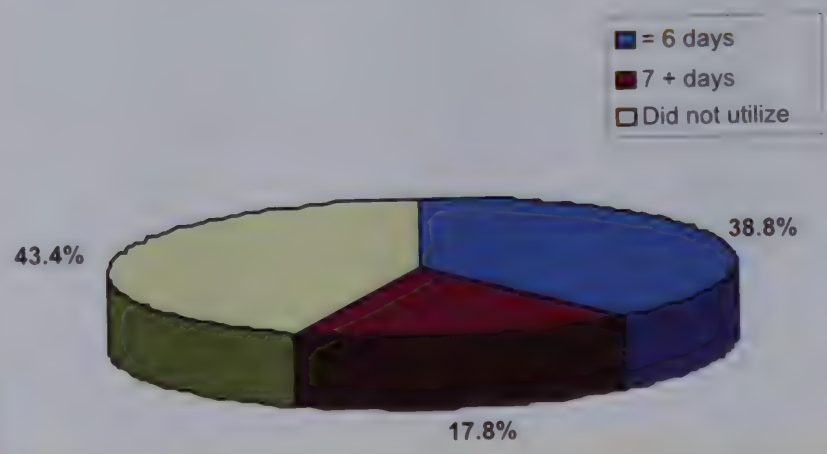
Percent MAGs Reported Treatment Utilization for Intra Natal Complications

Of the MAGs who had intra natal complications, 24 percent did not seek any treatment for their complications.





Percent MAGs Reported Treatment Utilization for Post Natal Complications



39 percent of the married adolescent girls had high level of knowledge about reproductive health (High = 50% and above correct answers to ten questions regarding anaemia, contraception, RTI, early conception, maternal

and neonatal health). Knowledge about HIV is quite high among the MAGs with 85 percent reported to have heard about HIV.

f. Sixth Presentation: Covariates of early conception and reproductive health (Enclosed in Annexure – VI)

By Mr. G Kulkarni, IHMP

The covariates of early conception and its reproductive health outcomes were presented during this session. Findings from the session are summarized below.

1. Covariates of Conception before 17 Years: Conclusions from the data collected shows that married girls were significantly more likely to conceive before 17 years if they:

- Were residents of a small village
- Resided in Marathwada
- Were educated less than 8th class
- Worked as a labourer
- Had husbands educated up to primary level or less
- Had poor exposure to the mass media
- Reported non consensual sex
- Were from a low socio economic strata household

2. Covariates of Maternal Morbidity: It was also found that married girls were significantly more likely to experience maternal morbidity if:

- They conceived before 15 years
- Had anaemia during pregnancy
- Reported history of reduced foetal movemer during pregnancy
- Resided in Marathwada
- Living in a larger village

3. Covariates of Low Birth Weight (LBW): Low birt weight babies significantly more likely in:

- MAGs getting married before 15 years
- In first order births
- With history of pre term delivery
- In normal compared to instrumental deliveries

4. Covariates of Early ANC Registration: Early registratio for ANC significantly more likely in:

- First pregnancies
- Educated MAGs
- With higher exposure to mass media
- Having an educated husband

5. Covariates of Home Delivery: Home deliveries we significantly more likely among married girls in:

- Nashik region
- Married girls with poor knowledge of reproductiv health
- Those not registered for antenatal care
- Those educated less than Class 4
- Those whose husband's education was less tha Class 4.
- Those from low socio economic households
- Those having poor exposure to the mass media

6. Covariates of RTI among MAGs who have nev conceived: Significantly higher likelihood of having R in a MAG who has not conceived if she is -

- Residing in Marathwada
- Has poor menstrual hygiene
- Has history of general illness or anemia

7. Covariates of RTI among MAGs who have ev conceived: RTI Significantly more likely in MAGs wh have ever conceived if -

- MAG is less than 17 years
- Has history of an abortion
- Has history of complication during last child birth
- Works outside the home
- Experiences physical violence

. Covariates of poor inter spousal communication: Poor nter-spousal communication was significantly more kely if the married girl was:

- A resident of Marathwada.
- Had low educational status
- Worked outside the home
- Had a husband with education less than 8th class.
- Reported non consensual sex and physical violence.
- Had poor knowledge of reproductive health

g. Seventh Presentation: Evidence Base for Efficacy of Intervention in the IHMP Pilot Study (Enclosed in Annexure – VII)

By Lt Col Anil Paranjape, IHMP

The objective of the presentation was:

- To compare the Reproductive Health Status of Married Adolescent Girls (MAGs) across various data sets and regions of Maharashtra.
- To demonstrate the efficacy of the pilot intervention.

A comparative analysis of data sets of married girls, the purpose being to spell out policy implications and demonstrate the efficacy of the pilot intervention was presented. Data from NFHS-3 (2006), the baseline (2003) and end line (2006) respectively of the IHMP intervention, the SATHI NGO research assessment (2008) and the baseline data of the PHC – RCT (2007) were compared.

Socio-demographic characteristics (educational status; work status; family type) and various reproductive health status indicators of married adolescent girls (median age at marriage; median age at first conception; percent antenatal registration before 12 weeks; percent receiving 3+ antenatal check ups; percent consuming 90 + IFA tablets; prevalence of LBW babies; pregnancy wastage; current contraceptive use; prevalence of self reported RTI; seeking treatment for RTI; deliveries attended by skilled persons) were compared from the various sources.

The policy implications of the comparative data analysis were:

1. The general recommendations were:
   - Identify high risk districts and focus resources in these areas.
   - Focus on adolescents with less or no education.
   - Focus on adolescents from the lower economic strata.
2. Recommendations for Behavior Change Communication were:
   - Develop BCC material appropriate for illiterate and semi literate audiences.
   - BCC to unmarried young men and their parents for encouraging marriage with girls older than 18
   - Ensure early registration of marriages in order to:
     - Identify and enroll married girls and their husbands
     - Provide BCC to the families to create a conducive environment for married girls
     - Provide BCC/ counseling to young couples to increase contraceptive use for delaying age at first conception
     - Provide counseling and gender sensitization to husbands to decrease non consensual sex and violence against women.
   - BCC to promote menstrual hygiene
   - BCC to promote early registration for antenatal care
   - BCC for institutional delivery particularly for the first delivery
   - BCC for increasing utilization of reproductive health services
   - BCC to promote inter-spousal and intra-family communication
   - Increase use of mass media and complement it with inter-personal communication
3. The recommendations for Service Provision were

the following:

- To Introduce a monthly surveillance system for early detection of reproductive health needs
- To Address reproductive health needs through provision of primary level care and referral services
- To Employ Direct Observed Treatment (DOT) strategy for prevention of anaemia
- To Ensure early detection of spontaneous abortions and referral for Post Abortion Care
- To Decentralize Post Abortion Care services to rural hospitals
- To Build the capacities of staff at rural hospitals to provide Post Abortion Care

4. For Policy Formulation, the suggestions were the following:

   - Fill gaps in the existing policies on adolescent reproductive and sexual health (ARSH)

Inclusion of married adolescents in the policy framework of ARSH

h. Eighth Presentation: The Policy Scenario – A review of key policy documents for adolescent health (Enclosed in Annexure – VIII)

By Dr Kumudha Aruldas, Additional Director, PFI

This presentation reviewed the policy scenario for adolescent health pointing out that there are a large number of policies featuring adolescents. However, the focus was on the National Population Policy, 2000, in which adolescent reproductive and sexual health was one of the twelve strategic themes. It recognized that adolescents had special needs and laid emphasis promoting delay in age at marriage and child bearing well as provision of reproductive health services nutrition to adolescents in rural areas in particular. It advocated education on sexual and reproductive he to adolescents. The operational strategies on the N 2000 are to:

- Ensure access to information, counseling services that are affordable and accessi Emphasize spacing.
- Provide package of nutritional services availa under the ICDS programme.
- Enforce the Child Marriage Restraint Act, 1976 reduce the incidence of teenage pregnancies.
- Provide integrated intervention in pockets v unmet needs (urban slums, remote rural ar border districts and among tribal populations).

The National Youth Policy (NYP) of 2003 was another policy for adolescents in the age group of 13-35 yrs v broad sub-groups of 13-19 yrs & 20-35 yrs. Its th areas included adequate nutrition, gender justice access to adequate health services. Specific objec related to health - to facilitate access to he information and services, promote a social environm which strongly inhibits the use of drugs and other fo of substance abuse, wards off disease (like HIV/AI ensures measures for de-addiction and mainstream of the affected persons and enhances the availabilit sports and recreational facilities as constructive out for the abundant energy of the youth. Health and fa welfare were identified as one of the key areas concern for youth. Population education inclu promotion of responsible sexual behavior, correct ag marriage and first conception, spacing and limi family size.

Strategies followed by NYP 2003

- Government , Youth Organizations and NGOs, wo promote the establishment of Youth He Associations
- Programmes to sensitize medical and para-m students on the issues of health and hygiene an the IEC component of various disease co programs instituted
- "Peer Education" will be an important elemer promoting health services.

Under the National Rural Health Mission and RC

trategies laid out for ARSH included community nobilization and BCC for adolescent friendly sexual and eproductive health services.

he major issues identified in NRHM/ RCH-II was:

- Influence of socio-cultural environment Half of Indian women (20-24 years) has married by the age of 18 years and almost one-quarter by 15 years.
- Low utilization of services Lack of awareness, myths and misconceptions, absence of support from family, adults and service providers
- Limited access to sexual and reproductive health services. Newly married women, receive no special attention from health providers despite the fact that they have limited mobility, decision making power, and risks of pregnancy are acute among them.

The ARSH strategies for RCH-II were:

- Increase availability of representative data on ARSH (age and gender disagg.).
- Community mobilization and BCC for adolescent friendly SRH services
- Improve provision and utilization of services by specifically addressing barriers that exist at the two levels

The actions proposed for RCH-II were:

- Sub-centre, PHC, CHC and district hospital to deliver services through outreach, routine OPD, and a dedicated time
- Participation of peripheral functionaries of other depts, (AWW or youth coordinator), for organizing outreach services
- At sub-centre level - proactively register newly married couples and organize separate meetings.
- Once a month clinic for newly married adolescents and unmarried girls.
- Routine OPD for married adolescents at PHC and CHC levels,

The key interventions under RCH-II were:

- Orientation of Service Providers: modules developed
- Service Delivery Protocols : developed
- Environment Building Activities: aimed at district officials, panchayat members, women's groups and the civil society

The outcome indicators for RCH-II were:

- Teenage Pregnancy rate
- Prevalence of RTIs/STIs among 15-19 years
- Use of Condoms during last sex among 15-24 years
- Mean age at marriage
- No of maternal deaths among teenage mothers
- Proportion of HIV positives among 10-19 yrs age group

The Eleventh Five Year Plan (2007-12) for the Social Sector recognized the public health challenges for adolescents and promoted advocacy for delaying age at marriage. The eleventh five year plan -

- Recognizes public health challenges for adolescents (pregnancy, excess risk of maternal and infant mortality, STI, RTI, rising incidence of HIV and the inter-generational cycle of under-nutrition and ill health)
- Promotes advocacy for delay in age at marriage and optimum health and nutrition interventions during pregnancy.
- Plan includes provision of knowledge and skills to providers, material development and adolescent friendly services at PHCs, CHCs

However, there needs to be a discussion on whether the current policies adequately addressed the needs of married adolescents and if a separate policy was required for them. Some of the questions raised were: whether current policies adequately address the needs of married adolescent girls; should there be a separate policy to have a greater emphasis on implementation the policies; whether the policies are effectively translated into project implementation plans; with interventions that suitably address the needs of married adolescents; or are there gaps in the process? What solutions can be offered if implementation of policies is a problem? What could be the possible avenues for scaling up the Maharashtra SATHI model and is there any specific geographic focus to begin with?

III. Concluding Session

Dr Dyalchand introduced Anjana; a married adolescent from Pune slums who had participated in the

project who he said was the human face of the project. Dr Dyalchand revealed that Anjana's parents wanted to marry her at 13, but she managed to negotiate with them and put it off till she was 16. After marriage Anjana's in-laws pressured her to demonstrate her fertility immediately but again, she managed to postpone her first delivery till she was 18. Anjana participated in all IHMP antenatal and postnatal care progammes.

The major points discussed in the workshop were as follows:

Discussion points

- Several queries on ethical issues of the RCT were raised e.g if informed consent had been taken of all the respondents and what was the basis of selection of the respondents for the randomized control trials
- What is the most cost-effective strategy of SATHI model for bringing about this change at the national level
- There were many querries on the type of BCC being imparted to the MAGs
- What can be done to address domestic violence against married girls, an aspect that came up in the research? What were the challenges/problems in the pilot that should be avoided in the scale up?
- Increasing the age at marriage has emerged as very significant for changing the situation. However, since the intervention looks only at married girls, how will a similar intervention ensure that age at marriage is also reduced
- Several participants commented that policies are not being adequately translated and that they need to be more youth-friendly.
- The randomized control trials offered an excellent chance to IHMP to look at various methods for dealing with scaling up issues, for instance, how to implement a project using community support for the community.
- Talking about whether the present policies needed to be changed, it was discussed that the purpose of this meeting was not to indicate the need for a new policy, but to point out the gaps in our existing policies – the fact that married adolescents are being overlooked.
- The recognition of the fact that there was a need look at married adolescents and that randomiz trials on MAGS were on, it was time to start detail programmes, not policies.
- Many participants pointed out that, resou needed to be specifically allocated for marr adolescents

Dr Ranjit Roy Chaudhury who concluded the secc session said that it was noteworthy that the Maharash state government had taken on the IHMP program and shown the way to the rest of the country.

The dissemination workshop was followed by a me interaction to disseminate the main objectives of t workshop and to share the evidence collected by t SATHI project. Besides Dr Kumudha Aruldas who talk about the aims of the workshop and the role of PFI in t efforts to upscale the project, information was shared Dr Dyalchand, director, IHMP, Dr Khale, IHMP and Prakash Doke, directorate, health services, Maharasht Anjana, a married adolescent girl, also shared h experience and how she benefited from t interventions made by IHMP.

Most of the queries raised by the participants we addressed by Dr. Dyalchand and the IHMP tea However, the issues which were remained unanswer were as follows: -

Participants requested for following additior information during the SATHI DWS

1. Research

- ***Data on Use of Contraceptives:***

  From baseline to end line, there is an increase CPR in the study area. What is the method w increase in the use of family planning methods?

- ***Ethical Issues***

  Did study participants in the control area know that as part of the RCT, they were not entitled for benefits? What was done to enable consent from respondents in the control area?

  Dr. Dyalchand did say yes.

- ***System of randomization***

  How the randomization was done and what levels? What was the sample size and how was it selected?

  Prevention of contamination in the RCT area would be a great challenge as doctors will be transferred and also people will migrate from one district to another. What measures are taken to minimize the contamination?

2. Implementation

- ***Behavior Change Communication***

  Inter-personal communication strategies were mostly used in the intervention. Were other modes like print media used given that it is cheaper, easier to replicate and effective? Intra personal communication would be difficult to replicate in the government system.

  How was the interpersonal communication between the spouses measured?

- ***Village Development Committee***

  Please elaborate on the role of VDCs and PRIs in the whole intervention.

  There were several questions on the capabilities of the frontline workers to collect quality surveillance data and also the mode of collecting it. Processes such as capacity building of frontline workers, how was the data collected, by whom, how often etc. need to be clearly mentioned.

3. Implications for scaling up

- What are challenges faced for addressing issues related to married adolescent girls?
- How to motivate and train the government workers? How could this program be sustainable?
- What is the cost for doing this trial? Is there any data on the cost of the intervention? Which is the most cost effective strategy of all the activities under the pilot?

Responses to the above mentioned questions / information are needed to be shared with stakeholders including Government (Central / States), for further advocacy of the model.

PROGRAMME SCHEDULE

9.30-10.00	**Registration**
10.00 – 10.10	**Welcome** – Dr. Kumudha Aruldas, Additional Director, PFI Dr. A. Dyalchand, Director, IHMP
10.10 – 10.30	**Opening Remarks:** Dr. Prakash Doke, Director, Health Services, Maharashtra Ms. Poonam Muttreja, Country Director, MacArthur Foundation Mr. Amarjit Sinha, Joint Secretary, Ministry of Health and Family Welfare, GoI
Session - I	**Chairperson** Dr. Saroj Pachauri, Regional Director, South and East Asia, Population Council
10.30 – 10.50	Pilot model and its findings - Dr. M. Khale, IHMP
10.50 – 11.10	Evidence from assessment in 5 districts of Maharahstra – 5 NGO sites – Dr. Anil Paranjape, IHMP
11.10 – 11.25	The situational analysis on ARSH issues using NFHS-III data for Maharashtra – Ms. Priti Bhat, IHMP
11.25 – 11.35	**Discussions**
11.35—11.45	**Tea Break**
Session - II	**Chairperson** Prof. Ranjit Roy Chaudhury, Member, Governing Board, PFI
11.45—12.00	The inception of the Randomized Control Trial and its present status – Dr. Dakure, DHS, Maharashtra Early Motherhood and its consequences: Evidence from assessment in 10 districts of Maharahstra – 20 PHCs – Dr. Aravind Menon, IHMP Covariates of Early conception and reproductive health - Mr. G Kulkarni
12.00 – 12.15	**Discussions**
12.15 – 12.30	Evidence Base for Efficacy of Intervention in the IHMP Pilot Study – Dr. Anil Paranjape
12.30 – 12.50	The Policy Scenario – A review of key policy documents for adolescent health – Dr. Kumudha Aruldas, PFI
12.50 – 1.10	Deliberations on Policy and Scope for Scaling Up
1.10 – 01.20	Concluding Remarks by the chairperson
1.20 – 1.30	**Vote of Thanks**
1.30 – 2.30	**Lunch Break**
3.00 – 4.00	**Media Interaction**

LIST OF ATTENDEES

Sl No	Name of the participants	Organizations
1.	Mr. Amarjit Sinha	Joint Secretary, Ministry of Health and Family Welfare, Government of India
2.	Dr. Prakash Doke,	Director, Health Services, Government of Maharashtra
3.	Mr Sanjay Prasad	Director (FP), Ministry of Health and Family Welfare, Welfare, GoI
4.	Ms Shailaja Chandra	Executive Director, Jansankhya Sthirata Kosh
5.	Dr V D Khanande	Deputy Director, Health Services, Maharashtra
6.	Dr D S Dakhure	Additional Director (FP), Health Services, Maharashtra
7.	Dr Narika Namshum	Deputy Commissioner (MCH), Ministry of Health & Family Welfare, GoI
8.	Dr I P Kaur	Deputy Commissioner (Training), Ministry of Health and Family Welfare, GoI
9.	Prof. Ranjit Roy Chaudhury	Member, Governing Board, PFI
10.	Dr Malabika Roy	Additional Director General, ICMR
11.	Dr Nomita Chandhiok	Deputy Director General, ICMR
12.	Ms. Poonam Muttreja,	Country Director, MacArthur Foundation
13.	Dr. Saroj Pachauri,	Regional Director, South and East Asia, Population Council
14.	Dr Rajni Ved	Management Systems International
15.	Ms W Sitashankar	Deputy Country Representative, Pathfinder International
16.	Dr M E Khan	Regional Associate Director & Senior Associate, Population Council
17.	Ms Anjali Sen	Deputy Director, IPPF
18.	Ms Dipa Nag Chaudhury	Senior Program Officer, MacArthur Foundation
19.	Ms Anne Bossuyt	Sr. Health Specialist, World Bank
20.	Dr Savita Mehta	Ministry of Health & Family Welfare
21.	Mr Sanjay Pandey	Country Program Representative, I. I. E.
22.	Dr Bulbul Sood	Director, CEDPA, India Office
23.	Ms Indu Capoor	Director, CHETNA
24.	Ms Geeta Narayanan	UNFPA
25.	Dr Jaya	UNFPA
26.	Mr Jitendra Panda	Country Health Advisor, Plan India
27.	Dr R K Das	Executive Director, Family Planning Association of India
28.	Dr Arundhati Mishra	Youth Coordinator, CEDPA,
29.	Ms Lilly Vishwanathan	Sr. Program Manager, Plan India
30.	Ms Mini Verghese	Family Health International
31.	Dr Jagmohan Khatry	Consultant, NIHFW
32.	Ms Namrata Jha	The David and Lucile Packard Foundation
33.	Mr Naheed Rizvi	Parivar Seva Sansth
34.	Ms Jayashree Nair	Population Services International(PSI)
35.	Ms Abira Chatterjee	IPAS India Office

Sl No	Name of the participants	Organizations
36.	Dr Pramod Samant Ray	Jansankhya Sthirata Kosh
37.	Ms Seema Gupta	Voluntary Health Association of India
38.	Dr Bidyut Mohanty	Institute of Social Science
39.	Mr L M Nayak	Regional Coordinator, BEL
40.	Ms. Manmeet Kaur	Student Researcher, University of Oslo
41.	Mr Pramod Deshmukh	Director, Sanskruti Samvardhan, Maharashtra
42.	Dr Vilas Lokhande	Apeksha Society, Maharashtra
43.	Dr Dinesh Ahirrao	President, Late Shriram Ahirrao Memorial Trust Maharashtra
44.	Mr Girish Pawar	Gramin Vikas Mandal, Maharashtra
45.	Mr Rajesh Shelke	Youth Welfare Asso. of India, Buldani, Maharashtra
46.	Dr Ashok Dayalchand	Director, IHMP
47.	Ms Manisha Khale	Associate Director, IHMP
48.	Lt. Col. Anil Paranjape	Program Director, IHMP
49.	Dr Arvind Menon	Project Director (SATHI), IHMP
50.	Mr D M Chaudhai	Chief Program Coordinator, IHMP
51.	Mr G R Kulkarni	Statistician, IHMP
52.	Ms Priti Bhat	IHMP
53.	Dr Kumudha Aruldas	Additional Director, PFI
54.	Mr S Ramaseshan	Secretary and Treasurer, PFI
55.	Dr Almas Ali	Adviser, PFI
56.	Dr Lalitendu Jagatdeb	Joint Director, M & E, PFI
57.	Ms Sona Sharma	Joint Director, Program Division, PFI
58.	Dr Sharmila S Neogi	Joint Director, Advocacy and Communications, PFI
59.	Mr Rakesh Kumar	Senior Project Manager, Scaling up unit, PFI
60.	Ms Shrabanti Sen	Program Manager, Scaling up unit, PFI
61.	Mr C S N Murthy	Finance Officer, PFI
62.	Mr Satya Vrat Vyas	Program Officer, PFI
63.	Ms K L Rao	Program Officer, PFI
64.	Ms Chandni Mallik	Program Officer, PFI
65.	Mr Satya Ranjan Mishra	Project Manager, PFI
66.	Mr Debabrata Buniya	Program Associate, PFI
67.	Mr Nihar Ranjan Mishra	Program Officer, PFI
68.	Ms Lopamudra Paul	Research Associate, M & E, PFI
69.	Mr R R Subramanian	Administrative Officer, PFI
70.	Ms Manju Sharma	PFI
71.	Ms Leelama Mathew	PFI
73.	Mr P K Paul	PFI
74.	Ms Usha Rai	Media coordinator
75.	Ms Rimjim Jain	Media coordinator
76.	Ms Sapna Mazumdar	Media coordinator

LIST OF JOURNALISTS AT PRESS CONFERENCE OF SATHI

SL. No.	Name of the Journalist	Media
1.	Savita Verma	Mail Today
2.	Kriti Srivastava	Amar Ujala
3.	Rashme Sehgal	Asian Age
4.	Sushma Varma	Hindustan Times
5.	Soni Sinha	Sahara Times
6.	Teena Thacker	Indian Express
7.	Rita Joseph	Statesman
8.	Shruba Mukherji	Deccan Herald
9.	Aditin Tandon	Tribune
10.	Ankita Malik	PTI
11.	Taru Bahl	Mint
12.	Rajeev Sharma	Hitavada
13.	Mangesh	Sakal
14.	Soumya Jha	SAAM TV
15.	Pratibha Shukla	Jansatta

M'rashtra delays girls' age of marriage

Aditi Tandon

Tribune News Service , Friday, August 22, 2008, Chandigarh, India

New Delhi

What started in Maharashtra as a pilot study to delay the age of marriage among adolescent girls may well find itself showing India the way. Over 50 per cent of adolescent girls in India still get married before 18, facing increased risk of neonatal and maternal mortality.

Conducted by the Institute for Health Management, Pune, through 2003 and 2006, the Safe Adolescent Transition and Health Initiative (SATHI) not just succeeded in delaying by one year the median age of the adolescent girl at marriage, it delayed by a year her median age at conception as well.

The most significant outcomes were increase in the interval between marriage and first conception from six to 10 months, and significant reduction in the proportion of married adolescent girls getting low-birth weight babies.

"Birth weight is a proxy measure for maternal and neonatal mortality (MMR and NMR). Reduction in the number of women delivering low-birth weight babies is a significant demographic indicator of a better MMR and NMR," said Dr A. Dyalchand, director of the institute, whose model the government is keen to replicate.

"We would be happy to scale up the intervention, though health is a state subject," Amarjit Sinha, joint secretary in health ministry today said.

Importantly, the initiative, which targets a hitherto neglected group of 15 to 19-year-old adolescent girls, managed a massive reduction in postnatal complications faced by married adolescent girls. The study becomes more relevant considering 26 per cent of total fertility in Maharashtra is contributed by married

adolescent girls (as per NFHS-3 data), which the study targets. This group suffers complications during and after delivery, with many girls enduring spontaneous abortions with terrible reproductive outcomes.

"Earlier it was believed that spontaneous abortions did not cause complications, but now there is evidence that 65 per cent of girls who have faced such abortions report severe complications," said Dyalchand, accompanied by director health services Maharashtra Prakash Doke Maharashtra has decided to gather more evidence in favour of the study by enhancing its scope to 10 districts and 20 primary health centres. It will then spread the project across the state.

For now, the available evidence sounds encouraging - age of adolescent girls increased from 15 (at the start of study) to 16 (at the end); age at conception advanced from 16 to 17 years through the period of study. The initiatives used were simple, as Dr Dyalchand explains, "Link workers held monthly surveillance to assess the study group's health needs, initiated strong behavioural change communication by telling men that real men marry women, not girls. Contraceptives were made available and their use increased three-fold over the study period. Community monitoring was kept strong." In terms of population, the study targeted 50 lakh girls, 25 per cent of them married.

Even the Population Fund of India today endorsed the study saying it addressed the vulnerabilities of a group (15 to 19 years) that tends to get lost in the general age group for reproductive health - 15 to 49 years. "If we have to reduce infant, maternal and neonatal mortality rates, we can't ignore this group," said additional director, PFI, Kumudha Aruldas.

Maha plan to reduce mortality in teen brides

Rashme Sehgal

ASIANAGE, Saturday, August 23, 2008, 04:34:13

NEW DELHI

A key pilot intervention targeting teenage brides in Maharashtra has shown that it is possible to reduce maternal and infant mortality rates in this vulnerable group. This was brought about by making reproductive and sexual health services available to married adolescent girls.

With the latest National Family Health Survey having confirmed that 44 per cent of all married girls across the country are below the age of 18, the ministry of health is now determined to scale up such an intervention across the rest of India.

The programme, titled Safe Adolescent Transition and Health Initiative (SATHI), was introduced for teenage brides who fall between the 16-19 age group between 2003-06. These adolescents comprise 26 per cent of the total fertility rate in Maharashtra with a population running close to 50 lakh. The nodal implementing agency for this intervention was the Institute for Health Management (IHM) in Pachod along with the Department of Health Services of Maharashtra.Dr Ashok Dyalchand, director of IHM, pointed out that this substantive demographic change was brought

about by delaying the age of marriage by one year from 15 to 16 years of age and by helping delay the period of conception from six to 10 months.

"These two interventions helped us reduce the percentage of low birth babies from 35 to 25 per cent in rural areas and from 27 to 18 per cent in urban areas," said Dr Dyalchand.

Two primary health centres with a population of 50,000 were selected with community workers put in place to ensure they keep a tab of the menstruation cycle of every woman in her ward. This required house to house identification. For unmarried men, the strategy adopted was to persuade them to select an older girl (16-year old and not 15-year old), while for couples it was to convince them to use contraceptives to delay conception. A significant fallout of this monitoring was that contraception use went up from 11 to 23 per cent in rural areas and from 8 to 30 per cent in urban areas. Reproductive tract infections of the mother also showed a substantive decline. Dr Prakash Doke, director, Health Services, Maharashtra claims that such an intervention especially in the tribal areas was not easy.

www.southasianmedia.net/cnn.cfm?id = 524859 & category=Social% 20 Sectors & Country= NDIA

The Ministry of Health is willing to scale up the Safe Adolescent Transition and Health Initiative (SATHI), a pilot intervention made in 2003-06 for married ...

www.dailypioneer.com/indexn11.asp?main_variable=Nation - 42k

Health ministry to step up focus on married adolescent girls

After ten districts of Maharashtra, the project will now be scaled up to other districts in the state and replicated in the rest of the country

Taru Bahl / Livemint.com
Posted: Thursday, Aug 21 2008. 2:57 AM IST

New Delhi Findings from the Safe Adolescent Transition and Health Initiative (SATHI), a pilot intervention for married adolescent girls made in 2003-06 in ten districts of Maharashtra has seen a significant drop in maternal mortality and post-natal morbidity. The project will now be scaled up to other districts in the state and replicated in the rest of the country.

Amarjit Sinha, joint secretary, Ministry of Health said, "the ministry would be happy to scale up the intervention, even though health was a state subject. Guidelines would be issued to ensure that the married adolescent programme is implemented within the existing health system, especially within the National Rural Health Mission (NRHM).

The SATHI project was undertaken by the Institute for Health Management, Pachod (IHMP) in 50 villages and 27 urban slums in ten districts of Mahahrashtra where there was a high prevalence of early marriage. A baseline survey in 2003 and an endline survey in 2006 assessed the impact of various interventions. Findings included a drop in percentage of low birth babies from 35% to 25% in rural areas and 27% to 18% in urban areas. Contraceptive use went up from 10.9% to 23% in rural areas and 8% to 30% in urban areas. New born

babies were found healthier, maternal health was better and there was a reduction in reproductive tract infections.

According to the National Family Health Survey –3, 2006, 45% women in the 20-24 age group in India are married before 18 years of age. In rural Maharashtra, 48.9% girls are married early and in urban areas it is 28.9%. Ashok Dyalchand, director, IHMP highlighted that in villages where girls could access health information and services, marriage of adolescent girls went up from 16 years to 17 years and there was a delay in the first conception by another year.

The project worked at two levels – first by identifying vulnerable groups and then offering focused interventions through community-based surveillance system, extensive behaviour change communication (BCC) and a spruced up primary level care and referral service system. Care was taken to keep the model simple and affordable. Each NGO which partnered with IHMP took charge for a site, comprising a cluster of villages that included up to 20,000 residents. An average of Rs700 per capita, per girl was spent during each of the years under the study period.

Pilot project in Maharashtra sets example for health ministry

August 21st, 2008 - 8:10 pm ICT by IANS

www.thaindian.com/.../pilot-project-in-maharashtra-sets-example-for-health-ministry_10087069.html
www.freshnews.in/pilot-project-in-maharashtra-sets-example-for-health-ministry-5645
news.webindia123.com/news/Articles/Health/**2008**0821/1033236.html
www.twocircles.net/**2008**aug21/pilot_project_maharashtra_sets_example_health_ministry.html - 19k
www.southasianews.com/286199/Pilot-project-in-Maharashtra-sets-example-for-health-ministry- htm - 35k

New Delhi, Aug 21 (IANS) After the success of the Safe Adolescent Transition and Health Initiative (SATHI) pilot project in Maharashtra, the ministry of health has decided to look into scaling up of this project into other states as well.After a presentation and workshop on the project by director of Health Services, Maharashtra, Prakash Doke, in the capital Thursday, Amarjit Sinha, joint secretary in the health ministry, said the ministry would be happy to scale up the intervention even though health is a state subject.

There is need to give focused attention to specific problems of various vulnerable groups like married adolescent girls. The ministry could give the guidelines so that the married adolescent programme could be implemented within the existing health system like the National Rural Health Mission," Sinha said.

SATHI, a three-year project, which was implemented between 2003-06 by the Directorate of Health Services, Maharashtra in collaboration with the Institute of Health Management, Pachod (IHMP) showed that maternal mortality and post natal morbidity resulting from early conception can be avoided

by making sexual and reproductive health services available to married adolescent girls.

Significant behavioural change at the individual and household levels, the study found, was also important.

Married adolescent girls, who are mostly below the age of 20, account for 26 percent of the total fertility rate of the state of Maharashtra.

After the three-year intervention in 10 districts of the state, it was seen that the age of marriage of adolescent girls in the state went up from 16 years to 17 years and there was a delay in the first conception by one year - from 17 year to 18 years.

Ashok Dyalchand, director of IHMP said: "The most important demographic change was that the delay had in turn reduced the percentage of low birth babies from 35 per cent to 25 per cent in rural areas and from 27.5 per cent to 18.8 percent in urban areas.

"Further, a significant achievement was the increase in contraception use from 10.9 per cent to 23 per cent in rural areas and from 8 to 30 per cent in urban areas".

Annexure-I

Intervention Research on the Reproductive Health of Married Adolescents

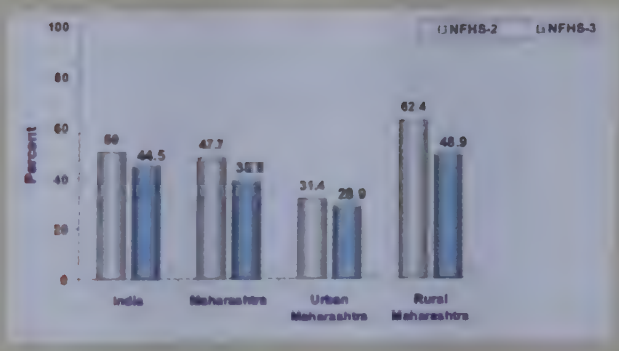
Results from a Pilot Study in Maharashtra

Institute of Health Management, Pachod

Research Supported by The MacArthur Foundation

Rationale

Prevalence of Early Marriage (< 18 years) among Women 20-24 yrs



Source: NFHS-2, 1998-99NFHS-3 2006-2

Strategic Thrust Required

As vital indicators improve

Need for

- Identification of Vulnerable Groups
- Focused Interventions

Intervention Research on the Reproductive Health of Married Adolescents

Results from a Pilot Study in Maharashtra

Institute of Health Management, Pachod

Research Supported by The MacArthur Foundation

Intervention Research

Evidence – Building Process

Objectives of the Pilot Study

Research Objective

- To test the efficacy of an intervention study to improve sexual reproductive health of married adolescent girls.

Research Questions

To Study Impact of Intervention on:

- Average age at first conception
- Contraceptive use
- Proportion of low birth weight babies
- Treatment seeking for RTIs
- Treatment seeking for post-natal complications

Quasi- Experimental Study Design

Rural Site (50 villages) — Post-Only Control

Intervention ● ——— X ——— ●
(n=824) (n=300)

Control ● ———
(n=400)

Urban Site (27 slums) — Pre-Post Test Design

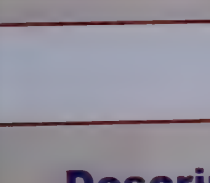
Intervention ● ——— X ——— ●
(n=314) 2003 (n=289) 2006

Intervention Design

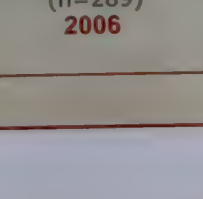
ARSH (married adolescents) HIV → **Integration** → Ongoing RCH - 2 Programme

Description of Intervention

Community Based Surveillance



Community Based Surveillance



BCC for Couples, Parents & Community

Primary Level Services

Village Development Committees

To Establish Delayed Marriage & Conception as **Social Norm**

Community Based Surveillance

Community Link Workers

- House-to house monthly surveillance
- 15-20 MAGs surveyed / month / village / slum

Detection of:

- Pregnancy <12 weeks
- Self Reported RTI/STI Symptoms
- Anemia
- Abortion
- Post-abortion complications
- PN Complications

Early Detection Through Community-based Surveillance

Indicators	February (n=2975)	March (n=4346)	April (n= 3535)
Women reported RTI symptoms	115	193	114
Women reported menstrual problems	110	206	174
Women reported anemia symptoms	277	685	509

Behaviour Change Communication

Social Norms Approach

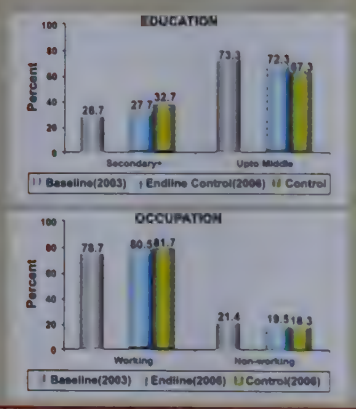
Peer Educator /	Community level	Weekly
Community Health	Household Level	Monthly
Supervisor / ANM / MPW	Village Level Group Meetings MAGs & spouses	Monthly
Supervisor / ANM / MPW	Primary Level Care Couple Workshops	Annual

Results

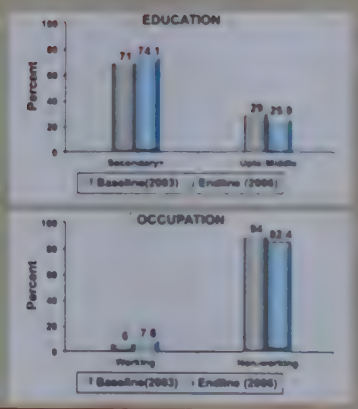
Part I

Socio-Demographic Characteristics

Rural

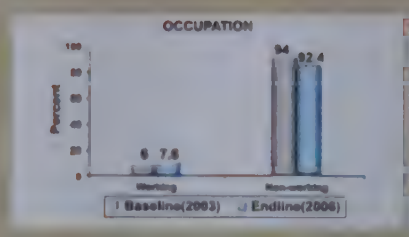


Urban



Socio-Demographic Characteristics

Rural



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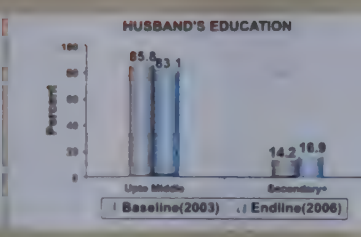
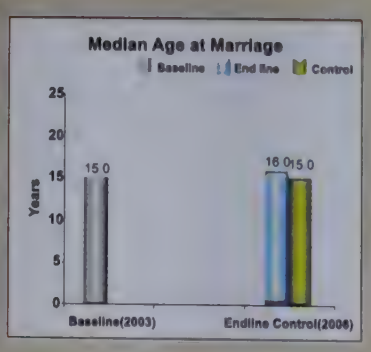


No difference in socio-demographic characteristics in both rural and urban areas

Median Age at Marriage

Rural



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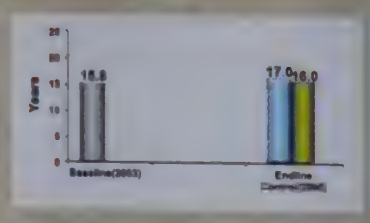
Median Age at First Conception

Rural



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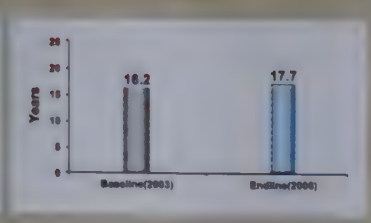
Urban



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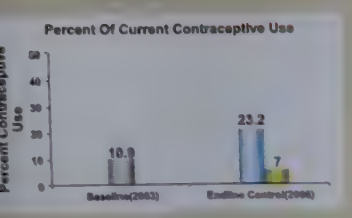
Mean Interval Between Marriage and First Conception (in months)

	Base line	End line
N	303	367
Mean Interval	6.6	10.3

	Base line	End li
N	218	274
Mean Interval	7.2	10.7

urrent Contraceptive Use

Rural



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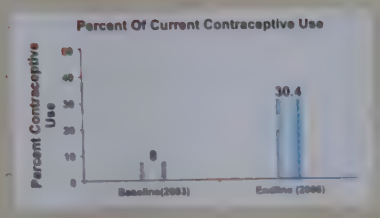


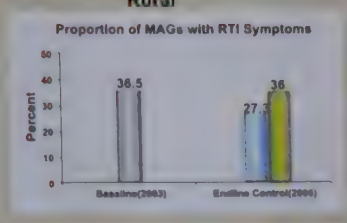
***p <= 0.000

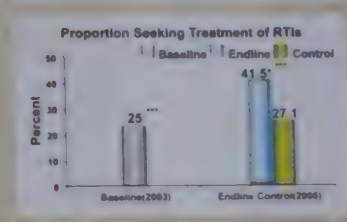
***p <= 0.000

Increase in Current Contraceptive Use

Self Reported Symptoms of RTI

Rural





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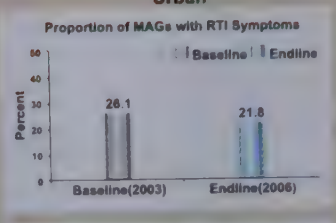

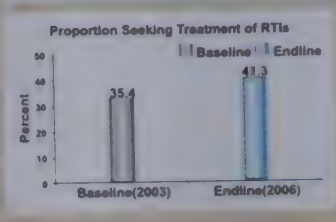

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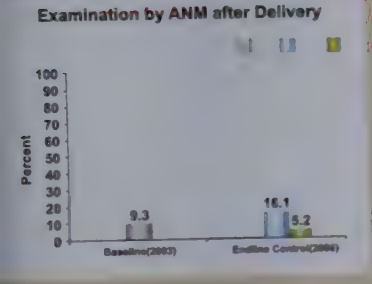
Post-Natal Care

Rural



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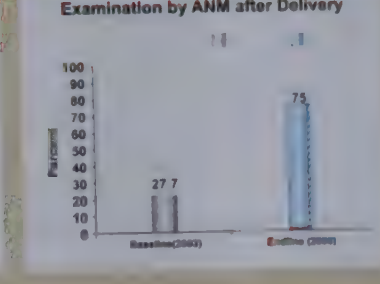
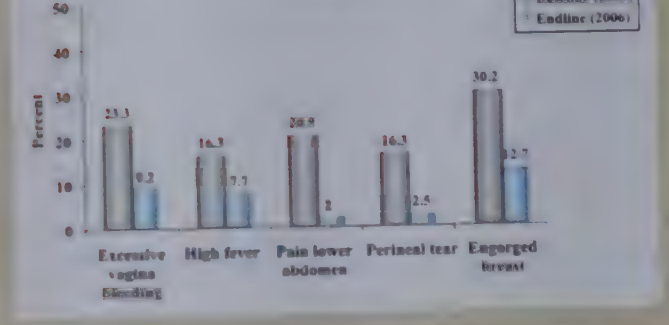


Self Reported Post-Natal Complications



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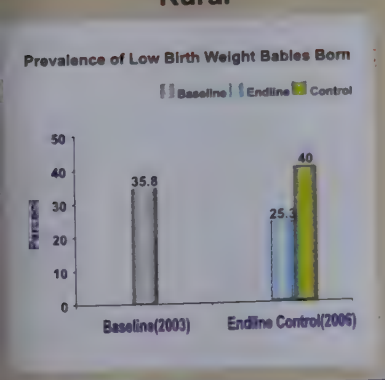
Prevalence of Low Birth Weight Babies

Rural



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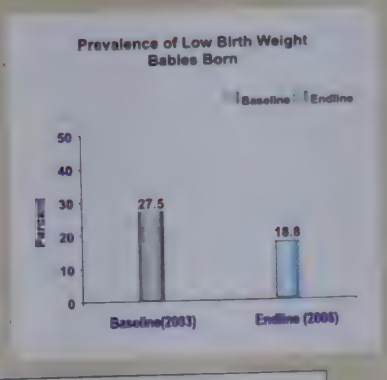
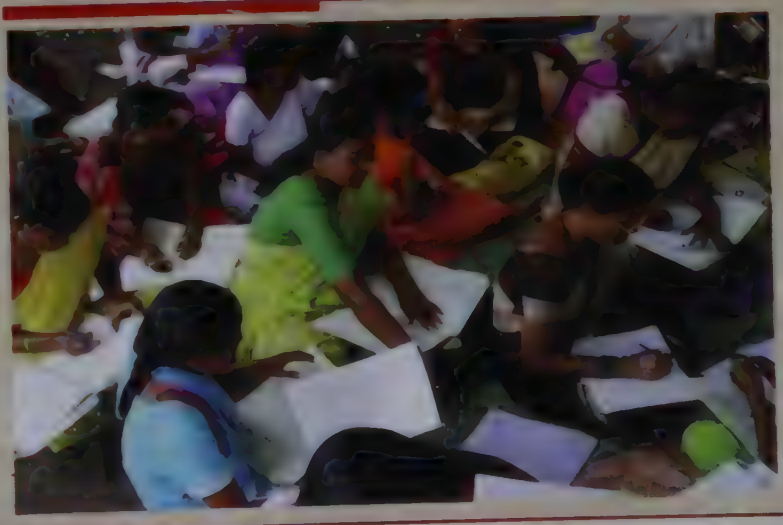
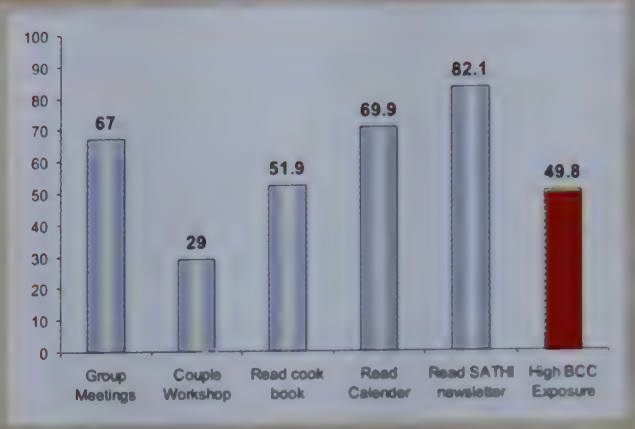


Reduction in Prevalence of Low Birth Weight

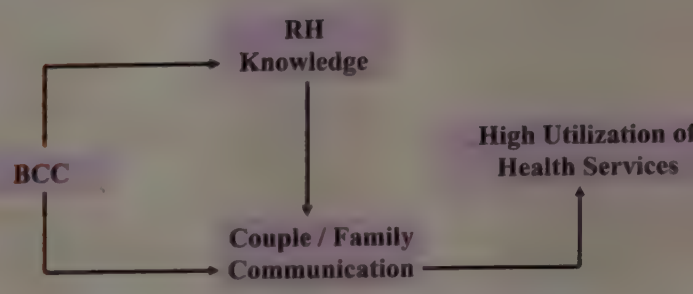
Understanding What Worked...



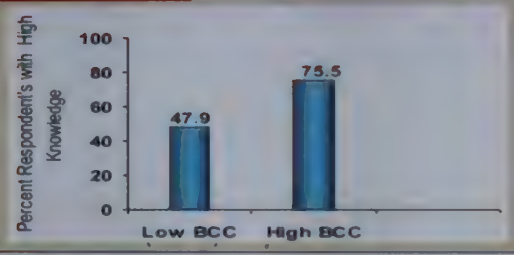
Level of BCC Exposure



Understanding BCC Pathways



BCC Exposure and RH Knowledge



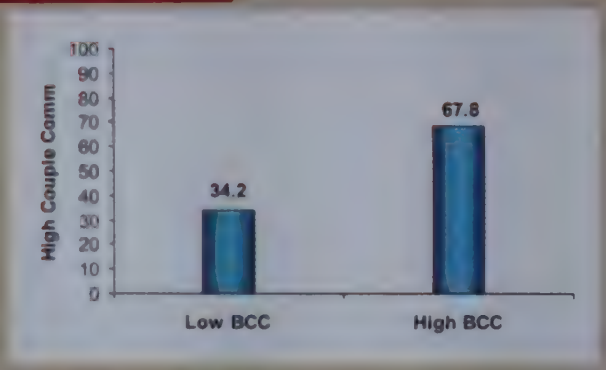
Disseminated Information on :

1. Diet & anemia 2. Abortion 3. Body Structure 4. Problems related to reproductive health
5. Family planning 6. Menstrual hygiene 7. LBW 8. ANC/INC/PNC 9. Delaying First pregnancy

High Knowledge = Having Awareness for more than 3 topics

High BCC Participation Associated with High RH Knowledge

BCC Exposure and Communication



(n = 289) ***p<.0001

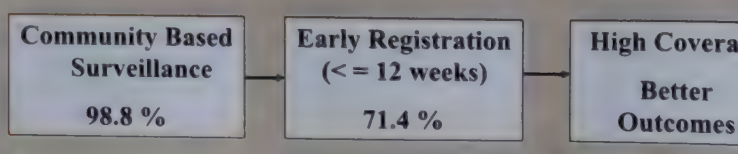
High BCC Exposure Associated with High Couple Communicatio

Communication & Health Service Utilization

Characteristics	High	Low
Current use of temporary FP methods	42.0%	24.0% ***
Early ANC registration	67.8%	58.5%
Treatment seeking for PN complications	65.6%	50.0%

*** p <.0001

Understanding Community Based Surveillance Path Ways



mpact of Early Registration on Service Utilization

Characteristics	Early ANC Registration (<=12 weeks of preg.)	Late ANC Registration(>13 weeks of preg.)	p value
Mean Number of ANC Exams.	6.70	5.77	0.0175
Consumption of IFA (90+)	40.1%	21.6%	0.007
Hospital Deliveries	90.5%	78.3%	0.016

ervice Utilization Significantly Associated with Early Registration

Predictors of Low Birth Weight - Logistic Regression

Variable	Category	Odds ratio	Confidence Interval
ANC Registration	Registered for ANC <=12 weeks of preg.	1	
	Registered for ANC > 12 weeks of preg.	2.68*	1.05-6.81

* $p < 0.05$ ** $p < 0.001$

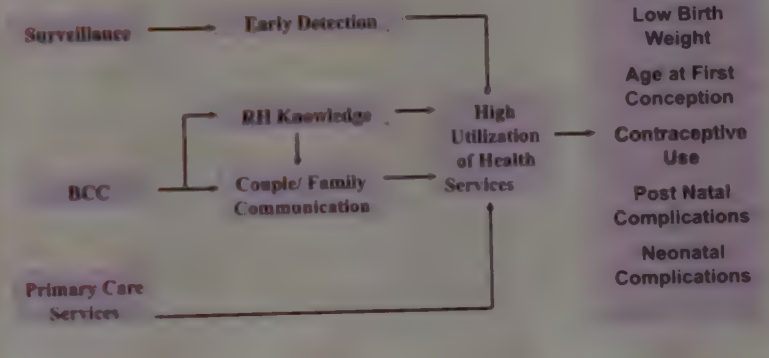
- Adjusted for Education, frequency of meals, registration for ANC, consumption of IFA, AN complications, age at first conception, age at marriage, knowledge of RH.

Key Lessons Learnt

Effectiveness of intervention

- Intermediate variables
  - Surveillance leads to early ANC registration
  - Couple / Family Communication influences social norm of early conception
- Outcomes
  - Delayed age at first conception
  - Increased use of temporary contraceptives
  - Reduced post-natal complications
  - Reduced neonatal complications
  - Decrease in Low Birth weight babies

Model for Improving RH Outcomes in Married Adolescents



The way forward.....

- Multi-site replication

Annexure-II

SATHI

Evidence from Five NGO Research Sites

District	NGO Researchers
Nanded	Sanskruti Samvardhan Mandal, Sangroli
Beed	Gramin Vikas Mandal
Amaravati	Apeksha Homoeo Society, Gurukun Mozari
Buldhana	Youth Welfare Association of India
Dhule	Late Shriram Ahirrao Memorial Trus Betawad, Shindkheda

Research Design

Quasi Experimental Research Design

- Intervention area – Five NGO sites – Each with 20,000 population
- Control area – PHC Matched by Socio-demographic variables in same district

Methodology

- Total Population – 1 Lakh
- Each NGO site - 20,000 Population
- Census – 100 % to form a sampling frame
- Systematic Random Sample of 200 MAGs fro each site.
- Interviews to cover 150 MAGs from each site
- Data Quality Assurance Mechanisms
  - Supervisory Checks
  - Consistency Checks

Socio de nographic Characteristics

(n = 818)

Variables	Total	Range (across 5 sites)
Current Mean age of MAGs (years)	17.8	13 to 19
Educational status of MAGs (%)		
• NIL	21.2	7.3 - 36.5
• 1 to 4	7.8	2.4 – 15.2
• 5 to 7	35.5	18.8 – 46.5
• 8 to 10	42.0	21.7 – 57.3
• 11 +	6.6	2.9 – 12.2
Occupation of MAGs (%)		
• Farmer	18.9	7.5 – 26.4
• Labourer	39.6	28 – 48.5
• Housewife	39.8	22.3 – 59.5
• Business	1.5	0 – 3

Socio de nographic Characteristics

(n = 818)

Variables	(%)	Range (acros 5 sites)
Educational status of MAG's husband (%)		
• NIL	16.3	4.8 – 26
• 1 to 4	8.9	3.0 – 15
• 5 to 7	15.4	10.7 – 20
• 8 to 10	35.2	17.6 – 48
• 11 +	24.0	16.9 – 31
Occupation of MAGs husband		
• Farmer	26.4	15.7 –
• Labourer	54.6	35.9 – 70
• Service	9.9	1.1 – 8
• Business	7.8	4.6 – 13

Socio de nographic Characteristics

(n = 818)

Variables	(%)	Range (across 5 sites)
Family type		
• Nuclear	32.9	15.8 – 43.8
• Joint	76.0	56.2 – 84.2
Presence of Mother in law	71.6	48.6-80.4
Number of rooms in household		
• <=2 (Low SES)	67.2	54.2 – 78.0
• 3+ (High SES)	32.7	21.9 – 45.7

Socio de nographic Characteristics

(n = 818)

Variables	(%)	Range (across 5 sites)
Religion		
• Hindu	78.1	67.8 – 84.7
• Muslim	12.4	7.9 – 19.8
• Buddhist	9.4	4.1 – 13.0
Exposure to mass media		
• Low	62.2	54.2 – 67.8
• High (Daily Exposure)	37.7	32.1 – 45.7

Reproductive Milestones of MAGs

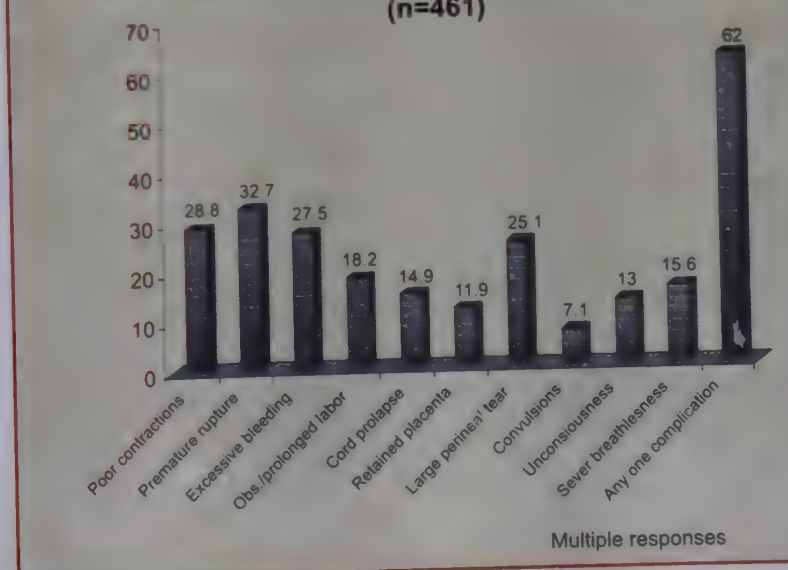
Characteristics	(n=818)
Median age in years at-	
• Menarche	13.0
• Marriage	15.0
• First conception	16.2 (n=628)

Nutritional Status of MAGs

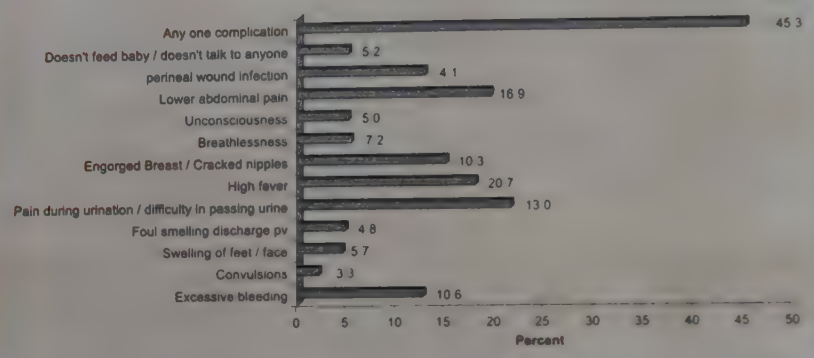
Variable	% (n=792)
Levels of Anaemia	
• Severe (Hb <8 mg / dl)	5.30
• Moderate (Hb 8-10 mg / dl)	16.9
• Mild (Hb 10-12 mg / dl)	45.1
Anaemic (Total)	67.3
Normal	32.7
BMI (n=798)	
• <18.5 (Undernourished)	47.7
• >=18. 5	52.3

Percent MAGs Reported Ante Natal Complications (n = 461)

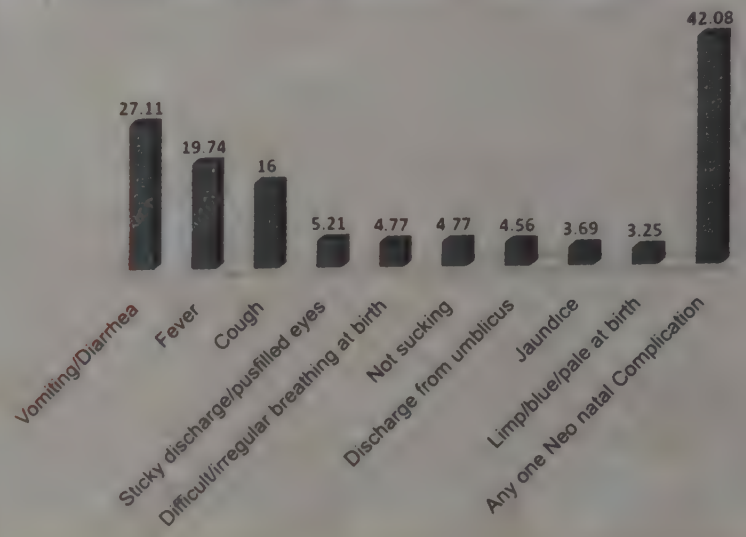
Percent MAGs Reported Intranatal Complications (n=461)



Percent MAGs Reported Postnatal Complications (n=461)



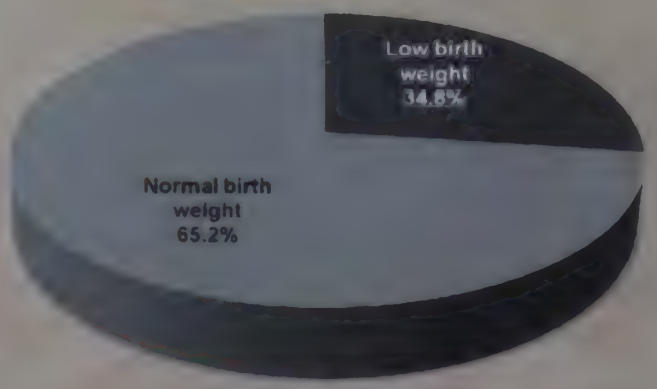
Percent of MAGs Reported Neo Natal Complications (n=461)



Percent MAGs Reported Maternal & Neonatal Morbidity - Summary

Variables	(n=461)
Ante Natal Complications	55.1
Intra Natal Complications	62.0
Post Natal Complications	45.3
Neo Natal Complications	42.1

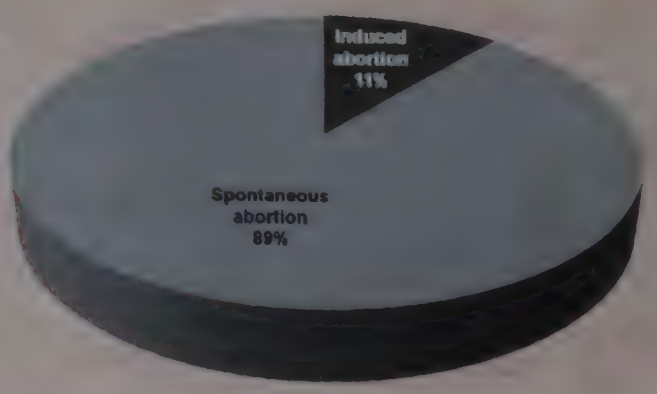
Percent Low Birth Weight Babies (n = 287)



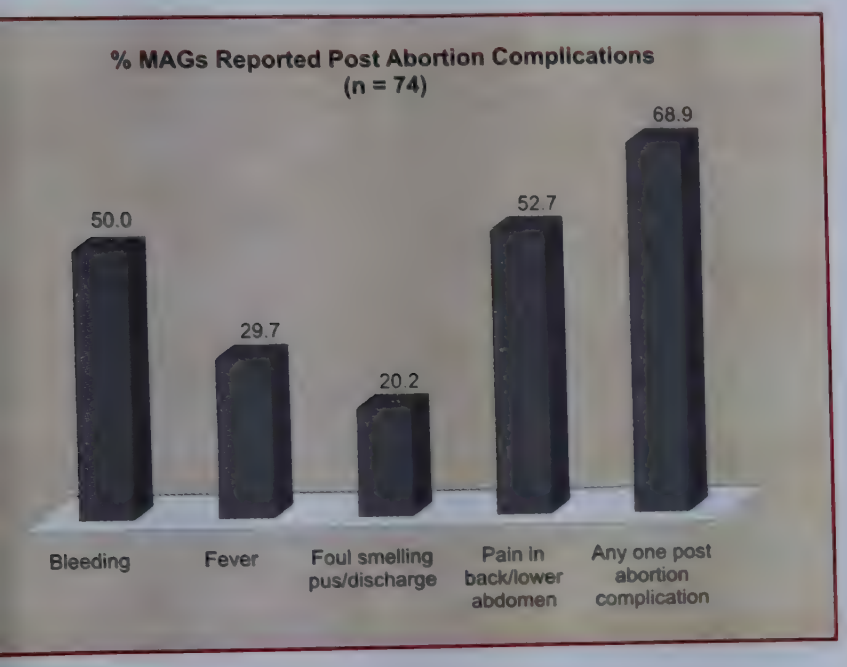
Pregnancy Wastage

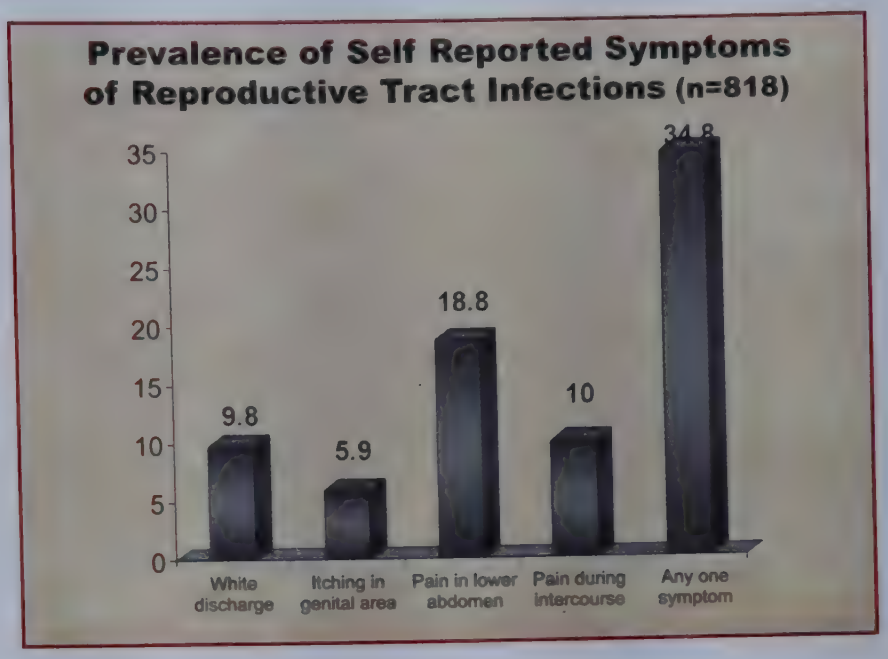
MAGs reported non-live births	%
Abortion Rate (Per 100 pregnancies)	11.7
Spontaneous Abortion Rate (Per 100 pregnancies)	10.1
Induced Abortion Rate (Per 100 pregnancies)	1.6
Still Birth Rate (Per 100 pregnancies)	2.0
Total pregnancy wastage (Per 100 pregnancies)	13.7

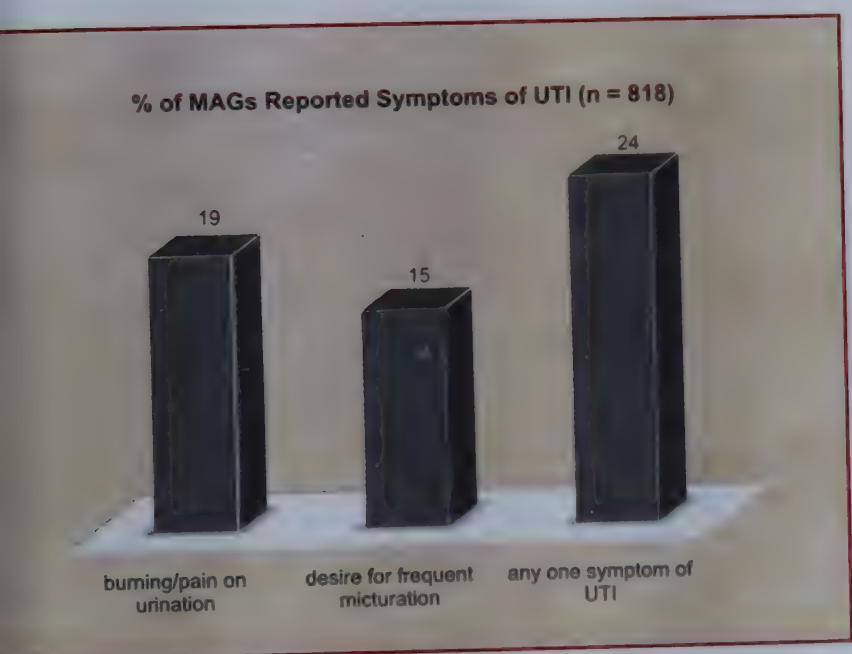
Types of Abortion in MAGs (n=74)

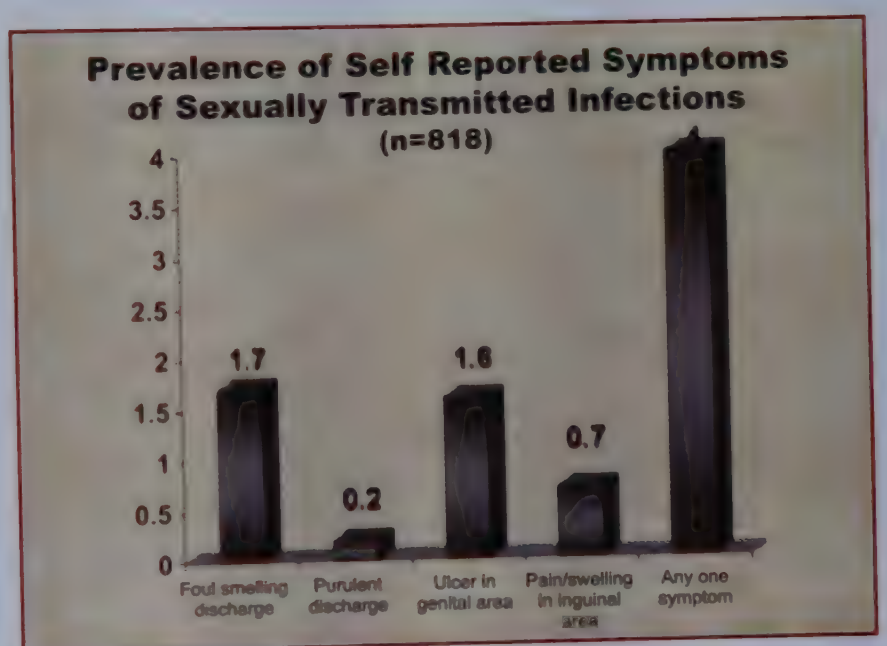


Majority spontaneous abortions in MAGs occur in the first trimester (IHMP,









Percent MAGs Reported Reproductive Morbidity - Summary

Prevalence	% (n=818)
• RTIs	34.8
• UTIs	24.2
• STIs	4.0

Percent MAGs Reported Domestic Violence and Non Consensual Sex

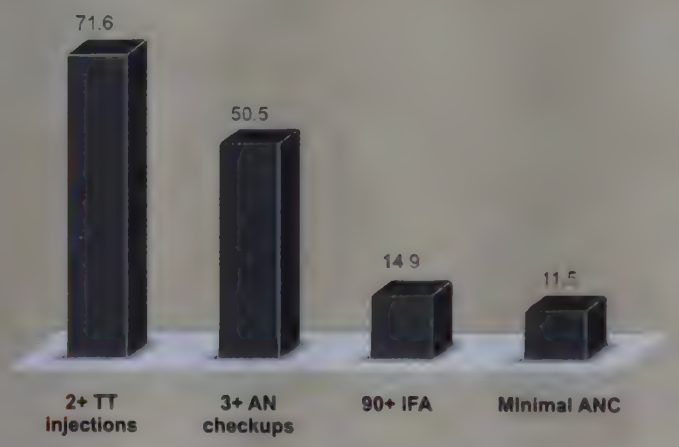
Variable	% (n=818)
Domestic violence (physical violence by spouse in the last one year)	18.1
Non – consensual sex	19.8

Contraceptive Use

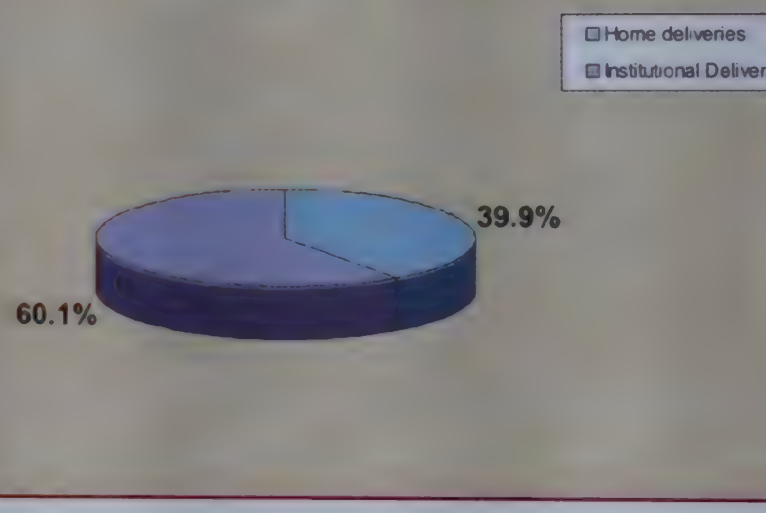
Variable	%
Contraceptive Use –	
• Ever Used	8.9 (n=818)
• Current Use (Among non-pregnant MAGs)	8.9 (n=606)

Treatment Seeking Behaviour

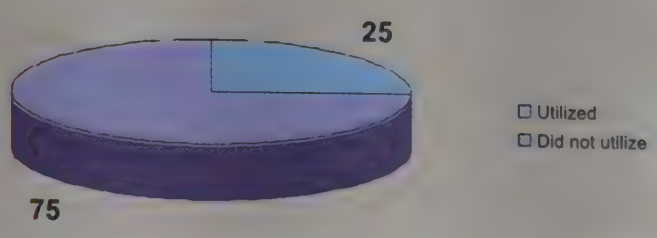
Percent Ante natal service coverage (n=461)



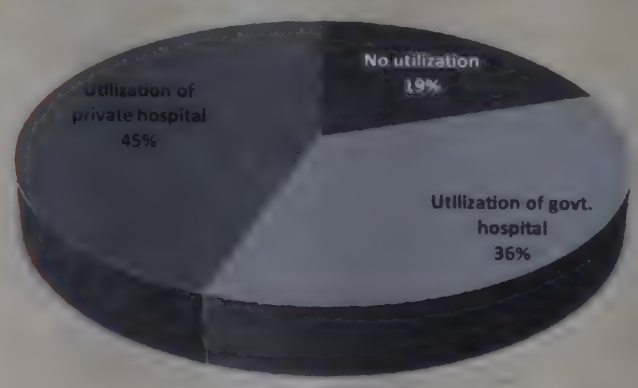
Place of Delivery



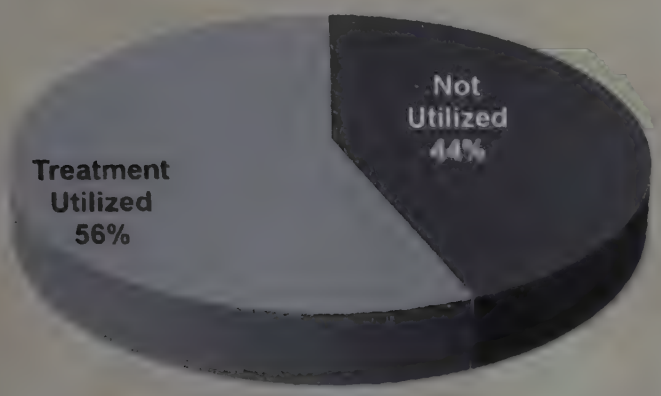
Percent MAGs Reported Treatment Utilization for AN Complications (n=254)



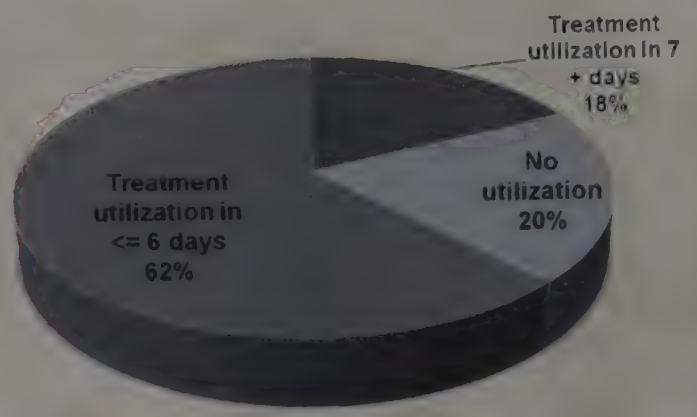
Percent MAGs Treatment Utilization for Intra Natal Complications (n= 286)



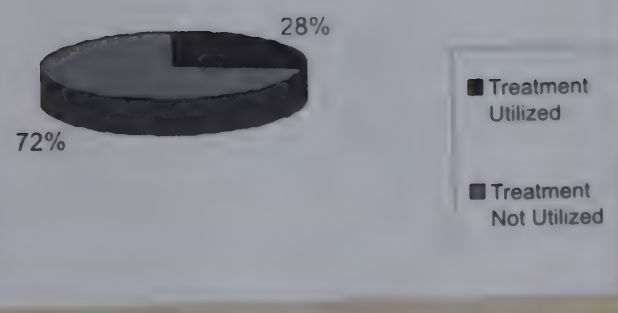
rcent MAGs Reported Treatment Utilization for Post Natal Complication (n=209)



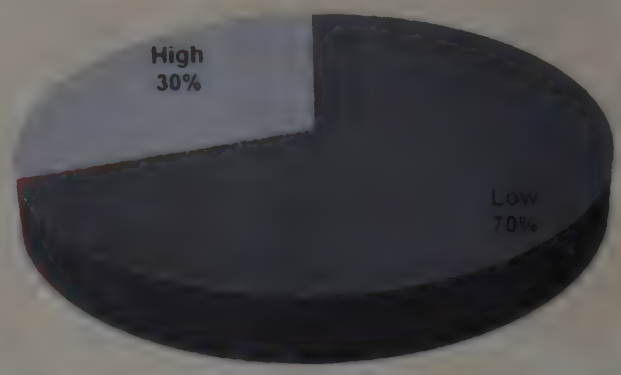
Percent MAGs Reported Treatment Utilization for Post Abortion Complications (n=51)



Percent MAGs Reported Treatment Utilization for RTI (n=285)

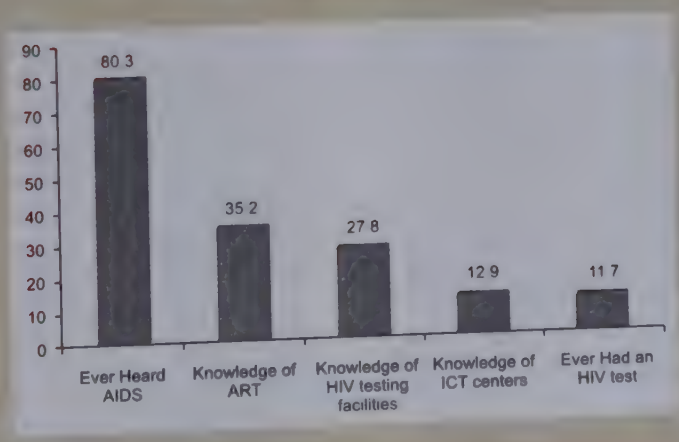


Percent MAGs with Knowledge About Reproductive Health (n=818)



High > 50% correct answers to ten questions regarding anaemia, contraception, RTI, early conception, maternal and neonatal health

Awareness of HIV/AIDS & HIV Testing (%)



Annexure-III

NFHS III Maharashtra

15-19 years

Section I

Scheme of Presentation

Scheme of Presentation

- NFHS III (2005-2006) Maharashtra
- Rural
- 15-19 age group
- Currently Married Adolescent Girls
- n=258

Section II

Socio-Demographic Characteristics

Socio-demographic Characteristics of Respondents

Characteristics	% (n=258)
Mean Age of respondent	17.7
Respondents education	
• Nil	22.1
• 1-4 std	13.9
• 5-7 std	29.5
• 8-10 std	29.1
• 11+ std	5.4
Respondents occupation	
• Housewife	41.8
• Agri-employee	54.2
• Skilled & unskilled manual	3.9
Exposure to Mass Media	
• Exposed to None	82.4
• Exposed to at least one	17.6

Socio-demographic Characteristics of Husbands

Characteristics	% (n=258)
Mean Age of Husband	25.0
Husband's education	
• Nil	15.1
• 1-4 std	12.7
• 5-7 std	17.3
• 8-10 std	32.9
• 11+ std	21.3
• DK	0.7
Husband's occupation	
• Unemployed	0.7
• Business	6.5
• Agri-labourer	49.0
• Services	10.5
• Skilled and unskilled manual	33.3

ocio-demographic Characteristics (Family)

Characteristics	% (n=258)
Religion	88.2
• Hindu	5.9
• Muslim	5.9
• Buddhist/Neo-buddhist	
Caste	
• Schedules caste	15.7
• Scheduled tribe	22.9
• Other backward class (OBC)	22.9
• None of them	38.6
Standard of living	
• Low	20.4
• Medium	39.5
• High	27.2
• Not dejure resident	12.9

Section III

Biological Characteristics

Reproductive Milestones of MAGs

Characteristics	% (n=258)
Median age (in years) at	
• Menarche	Information Not Available
• Marriage	15.0
• First birth (n=125)	17.0

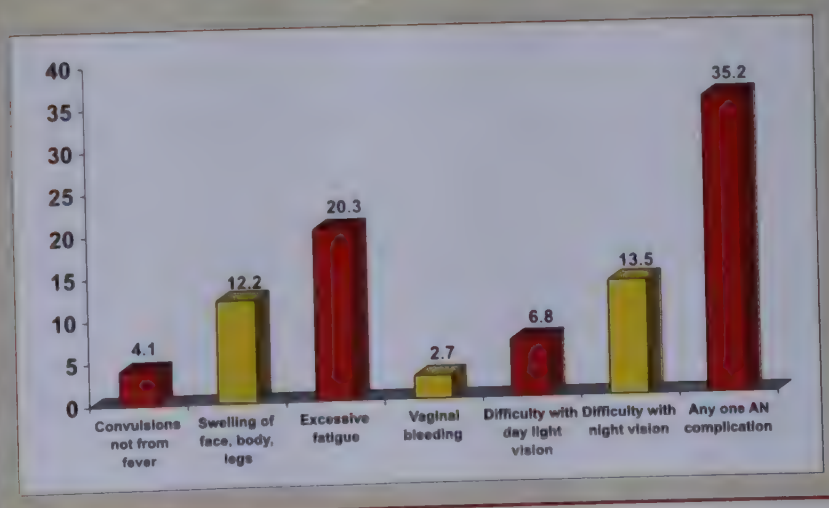
Nutritional Status of MAGs

Variable	% (n=238)
Levels of Anemia	
• Severe (Hb<8mg/dl)	2.9
• Moderate (Hb 8-10mg/dl)	24.1
• Mild (Hb 10-12mg/dl)	31.2
Anaemic (Total)	58.2
Normal (Hb>12mg/dl)	41.8
BMI	
• <18.5 (Undernourished)	41.8
• =18.5	58.2

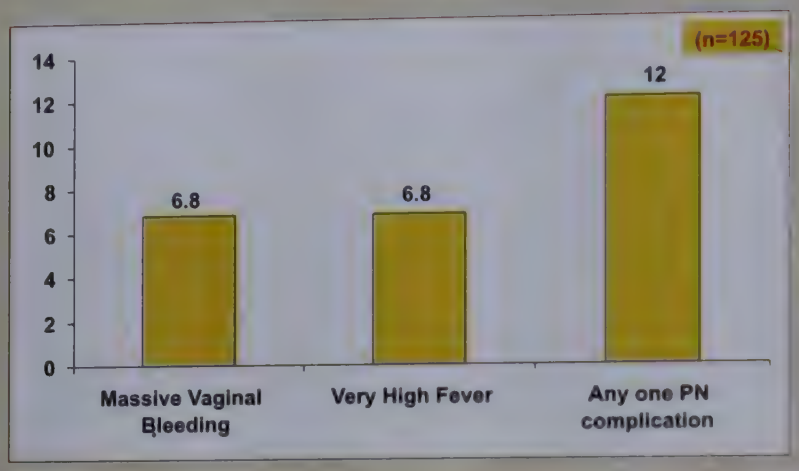
Section IV

Morbidity Burden

Percent MAGs Reported Antenatal Complications



Percent MAGs Reported Post-natal Complications



Percent of Low Birth Weight Babie

Pregnancy Wastage

Variables	%
Non-live births (Abortions, still births)	7.8

Percent MAGs reported STI

Percent MAGs Reported Domestic Violence and Non Consensual Sex

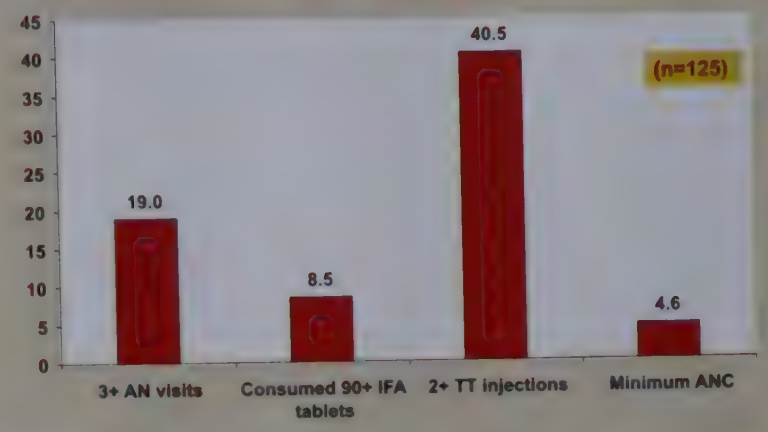
Variable	% (n=258)
Domestic Violence (Physical violence by Spouse in the last 12 months)	10.7
Non Consensual sex	0.7

Section V

Reproductive Health Behaviours

Current Contraceptive Use (%)

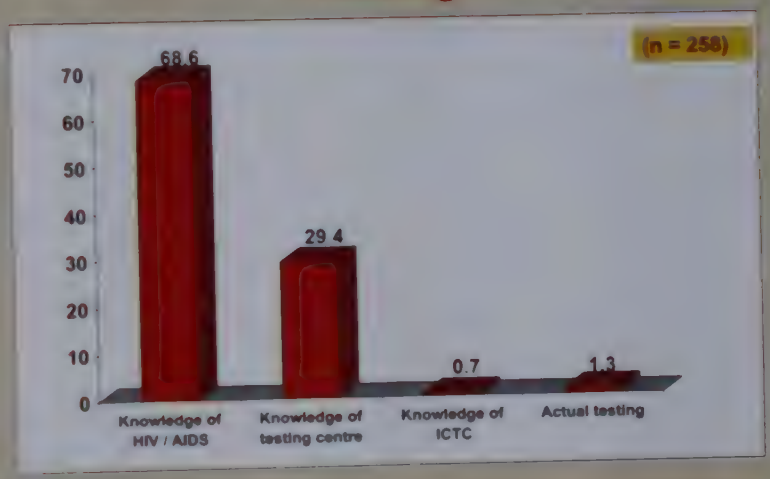
Percent MAGs Received Antenatal Services



Institutional Deliveries

Variables	% (n=258)
Place of delivery	
• Institutional	58.1
• Home	41.9

Knowledge of HIV / AIDS and HIV Testing



Thank You

Annexure-IV

A Randomized Control Trial to Test the Efficacy of a Community-based Intervention for Married Adolescents in Maharashtra

Study by
Directorate of Health Services, Maharashtra

in Collaboration with
Institute of Health Management, Pachod (IHMP)

Directorate of Health Services, Maharashtra

Why Married Adolescent Girls?

- In Maharashtra, 49% (rural) & 29% (urban) women (2 24yrs) married by 18 years[1]
- Adolescent girls likely to suffer malnutrition, vit. deficiencies & anemia[2] (51.7%)
- Age Specific Fertility Rate in Maharashtra higher in 1 19 yrs compared to all India rate[3]
- All three indicators considered in NRHM are adverse married adolescent girls

[1] *NFHS-3, 2006-07*

[2] *Choudhary and Mishra, 2003*

[3] *NFHS 2, 1998-99*

Intervention Research

Evidence – Building Process

Formative Research 2002	Pilot Intervention (Pre Post Design) 2003-2006	Control Group Designs 2007	**Multi-Site Randomized Control Trial**

Maharashtra

Total Numbers of districts in the State:	35
Districts with High Tribal Population:	15
Total rural population of Maharashtra:	57.57

Maharashtra

10 Districts selected for the Randomized Control Trial

Objectives of Randomised Control T

- To assess reproductive health problems in **married adolescents** in 10 high risk districts of Maharashtra
- To assess the impact of an **Adolescent Reproductive and Sexual Health (ARSH)** intervention on health of adolescent married girls through a randomized control field trial
- To develop an **ARSH model** for married adolescents in rural Maharashtra

Randomised Control Trial

Base-line 2007 — End-line 2010

O ——— X ——— O

O ——————— O

O = observation X = intervention

Random Assignment

10 **Intervention** PHCs — 10 **Control** PHCs

SAMPLING PROCEDURE

Multi-stage stratified random sampling

10 Districts (Inclusion Criteria)

⬇

20 PHCs – 10 randomly selected, 10 matched

⬇

8 villages from each PHC

⬇

100 married adolescent girls Per PHC

[Overall sample 2000]

Selection of Districts

- Inclusion criteria - Most backward districts
- High proportion girls married <=18 years
- RCH-2 Composite index
- Human Development Index, Gender Development Index

10 MOST BACKWARD DISTRICTS IN MAHARASHTRA 1998-99

DISTRICTS	Regions	Rank (State)	Rank (Country)
Parbhani	Aurangabad	35	268
Hingoli	Aurangabad	34	267
Jalna	Aurangabad	33	264
Nanded	Aurangabad	32	259
Bid	Aurangabad	31	238
Gadchiroli	Nagpur	30	245
Dhule	Nashik	29	228
Nandurbar	Nashik	28	227
Yavatmal	Amravati	27	223
Buldana	Amravati	26	219

Source – Srinivasan, K, et al, 2001, 'Situational Analysis of Maharashtra', paper presented in Pune, Maharashtra, 4-5 October.

Selection of Primary Health Centres (PHCs)

Number of PHCs = 446

- Sampling fraction = 45
- 10 PHCs selected by systematic random sampling
- One PHC per district

Selection of PHCs

10 Randomly Selected PHCs

Criteria for Matching
- ✓ Population characteristics
- ✓ PHC performance
- ✓ RCH status
- ✓ Farthest distance from randomly selected PHC

10 Matched PHCs

Selection of Villages

8 villages per PHC were selected

2 large (> 2000 pop), 2 medium (1000-2000 pop), 4 small (< 1000 pop)

Selection of Respondents

- Complete census of village
- Listing of married adolescent girls
- Systematic random sampling
- Sample proportionate to population size

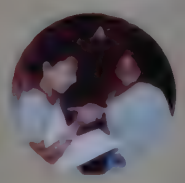
Distribution of Sample by Distri

Region	District	Number of MAGs Interviewed
Region 1 (981)	D1	197
	D2	201
	D3	199
	D4	195
	D5	189
Region 2 (569)	D6	179
	D7	203
	D8	187
Region 3 (386)	D9	202
	D10	184
	Total	1936

Intervention for the RCT

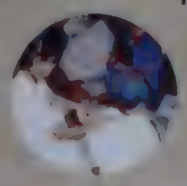
Adaptation of the Pilot Intervention

Components of Intervention Package



Community-Based Surveillance – Early Detection & Registration

BCC – Focus on Couples, Families & Communities



Primary Level Care & Referral

Intervention Strategy

Link Worker/ (community based)	Household Level	- Community Based Surveillance, - Registration
Anganwadi/ASHA worker		- Early Detection & Referral - BCC
Supervisor /ANM	Community Level	- Supervision - BCC - Antenatal & postnatal services
PHC	Community level	- Pregnancy detection kits - Antenatal & postnatal care - Post abortion care - Reproductive Morbidity

Key Areas of Focus

- Delaying First Conception
- Promotion of Contraceptive Use Prior to First Conception
- Early Registration < = 12 wks
- Treatment Seeking for Reproductive Morbidity
- Low Birth Weight

Challenges

- Adaptation of Pilot Intervention to the Government Health System
- Integration of Intervention with On-going RCH Programme
- Prevention of Contamination

Thank You

Annexure-V

Evidence from Baseline Survey in 20 PHCs, 10 Districts - 2007

Randomized Control Trial to Test Intervention for Married Adolescent Girls

Socio Demographic Characterictics

n = 193

Characteristics		Range across districts
Mean age of MAG (in yrs)	17.8	17.3 – 18.4
Educational level of MAG (%)		
• Nil	21.5	15.0 – 37.0
• 1 – 4 std.	9.9	5.4 – 12.8
• 5 – 7 std.	33.4	21.7 – 40.7
• 8 – 10 std.	26.4	24.5 – 41.4
• 11+ std.	6.7	3.1 – 11.2
Occupation of MAG (%)		
• Housewife	25.6	11.6 – 37.0
• Agri. Lab	19.4	9.5 – 32.7
• Farmer	51.8	34.2 – 64.5
• Labourer	2.7	0.5 – 6.2

Socio Demographic Characterictics

n = 1936

Characteristics		Range across districts
Mean age of husband (in yrs)	22.8	22.2 – 23.9
Education level of husband (%)		
• Nil	14.3	6.9 – 26.6
• 1 – 4 std.	6.5	4.5 – 7.6
• 5 – 7 std.	18.5	9.2 – 25.6
• 8 – 10 std.	36.2	32.6 – 41.3
• 11+ std.	24.5	19.1 – 32.8
Occupation of husband (%)		
• Farmer	56.2	35.9 – 65.2
• Agri. lab	27.1	20.2 – 40.6
• Business	8.3	4.5 – 15.8
• Service	7.6	5.4 – 10.8

Socio Demographic Characteristics

n = 193

Characteristics	%	Range across districts
Family type		
• Joint	83.9	66.5 – 91.5
• Nuclear	16.1	8.5 – 33.5
Presence of mother-in-law	82.1	65.4 – 91.0
Religion		
• Hindu	93.0	86.7 – 97.8
• Muslim	3.2	1.0 – 7.6
• Buddhist	3.7	0.5 – 8.0
Socio economic status		
• Low	64.2	60.1 – 74.3
• High	35.8	25.7 – 39.9
Exposure to mass media		
• High exposure	41.1	29.7 – 55.2

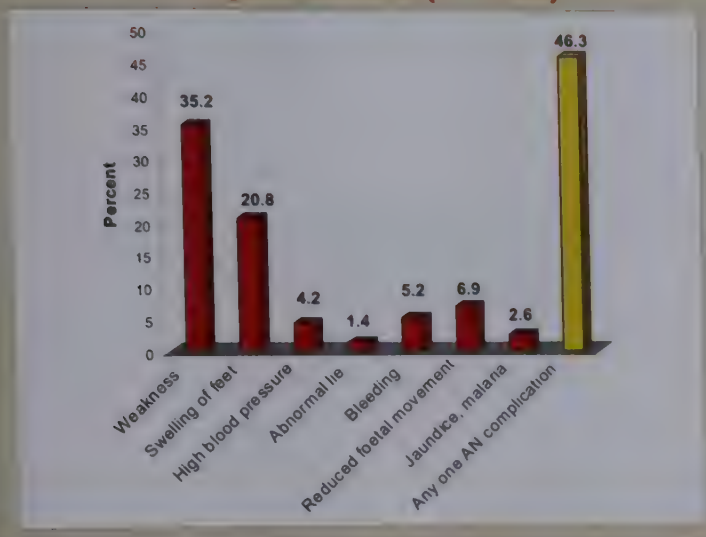
Reproductive Milestones of MAGs

Characteristics	Value (n=1936)
Median Age in years at	
• Menarche (Range 10 – 17yrs)	13.7
• Marriage (Range 10 – 19yrs)	16
• First conception (Range 12 – 19yrs)	16.8 (n = 985)

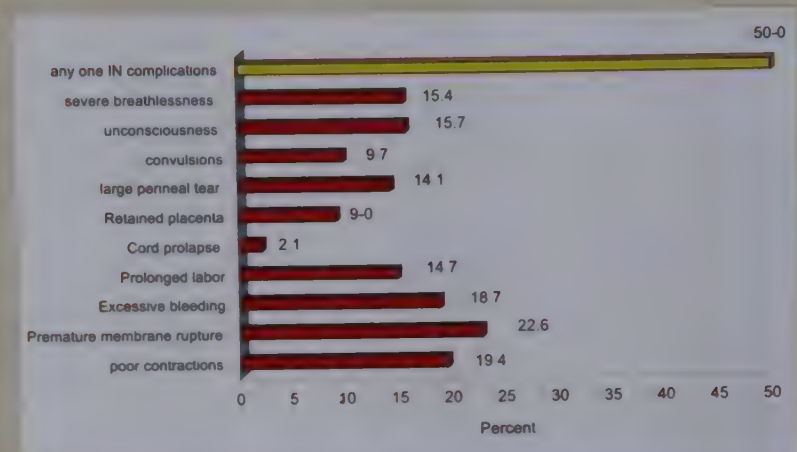
Nutritional Status Of MAGs

Variables	Value (n = 1920)
Levels of Anemia :	
• Severe (Hb <8 mg / dl)	2.3
• Moderate (Hb 8-10 mg / dl)	11.5
• Mild (Hb 10-12 mg / dl)	41.4
Prevalence of Anemia	55.2
Normal	44.8
Body Mass Index:	
• < 18.5 (undernourished)	43.8
• = 18.5	56.3

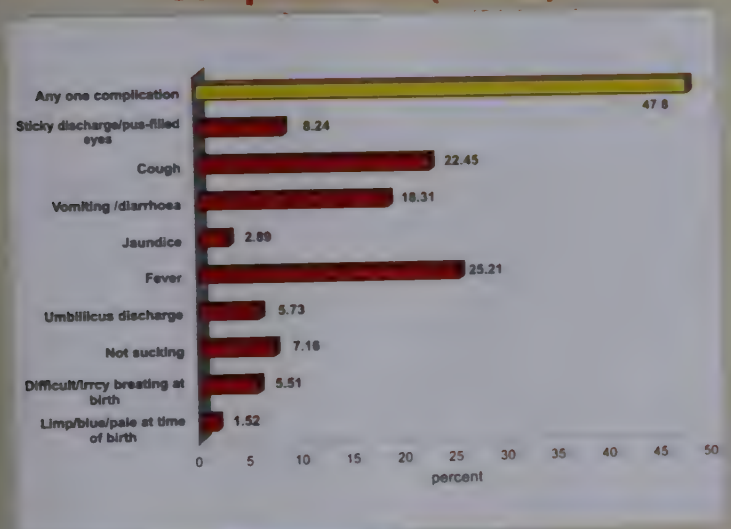
Percent MAGs Reported Antenatal Complications (n=726)



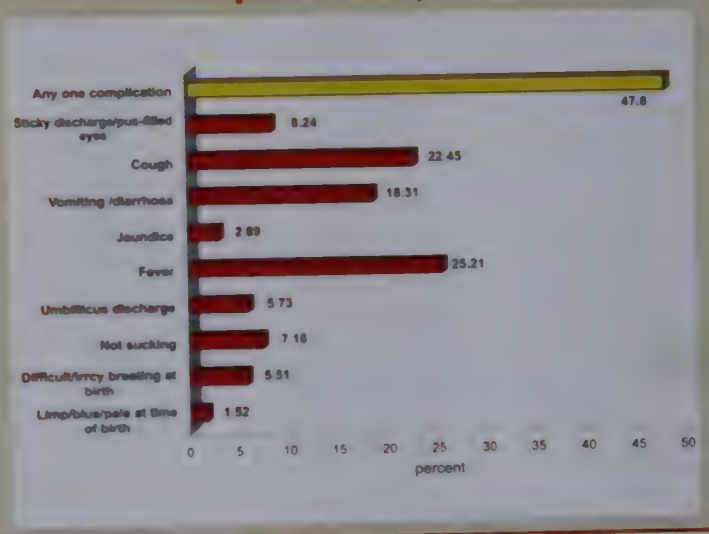
Percent MAGs Reported Intranatal Complications (n=726)



Percent MAGs Reported Neonatal Complications (n=726)



Percent MAGs Reported Neonatal Complications (n=726)

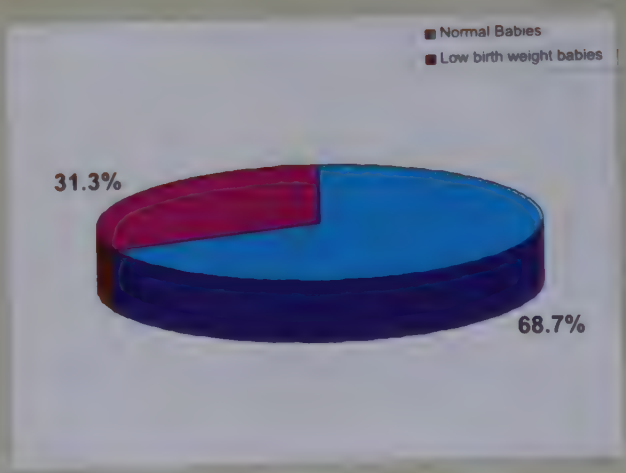


Percent MAGs Reported Maternal & Neonatal Morbidity - Summary (n=726)

Variables	%
Any one Antenatal Complication	46.3
Any one Intranatal Complication	50.0
Any one Postnatal Complication	57.5
Any one Neonatal Complication	47.8

History of Maternal & Neo natal Health was taken only for last delivery outcome as a live birth

Percent Low Birth Weight Babies (n=428)

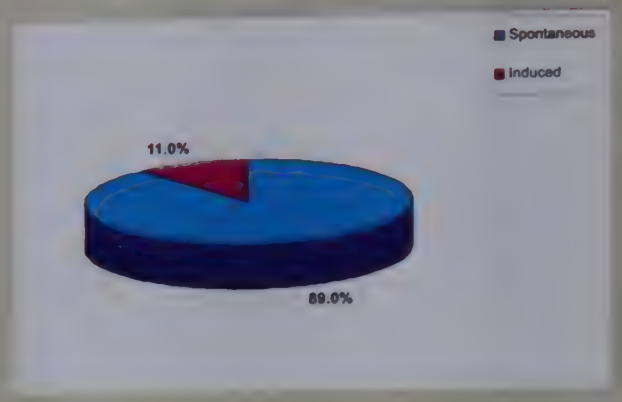


WH-105

Pregnancy Wastage

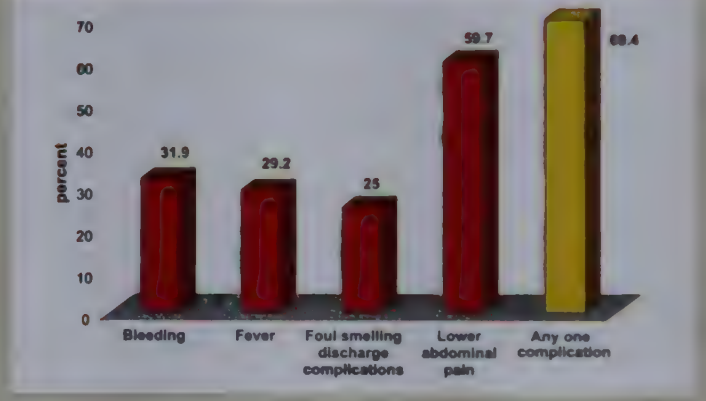
MAGs reported non-live births	Percent
Annual Abortion Rate (per 100 preg.)	7.8
Spontaneous Abortion Rate (per 100 preg.)	7.0
Induced Abortion Rate (per 100 preg.)	0.8
Still Births (per 100 preg.)	1.7
Pregnancy wastage (per 100 preg.)	9.5

Types of Abortion in MAGs (n=72)

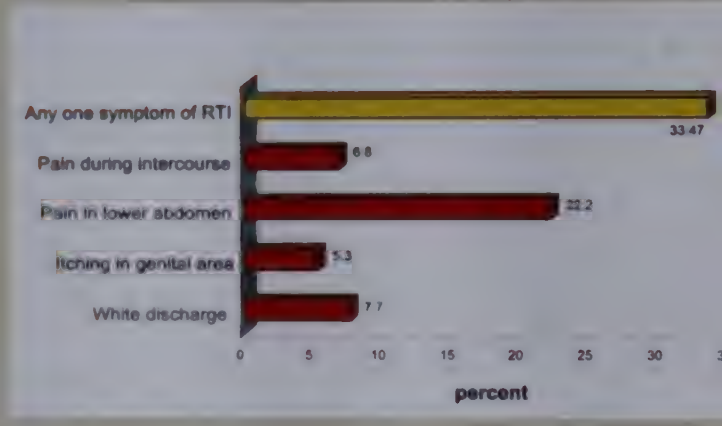


Majority spontaneous abortions in MAGs occur in the first trimester (IHMP,

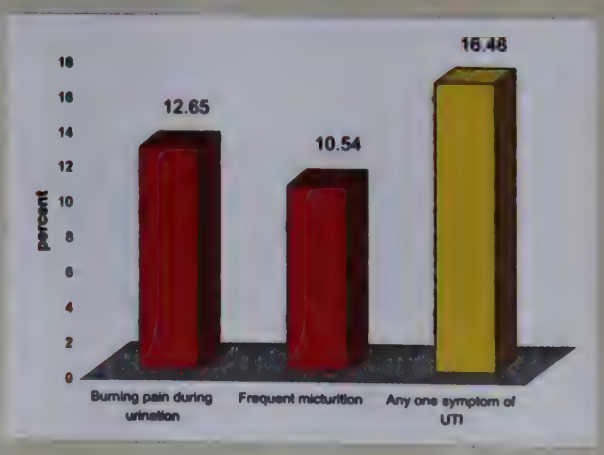
Post abortion Complications (n=72)



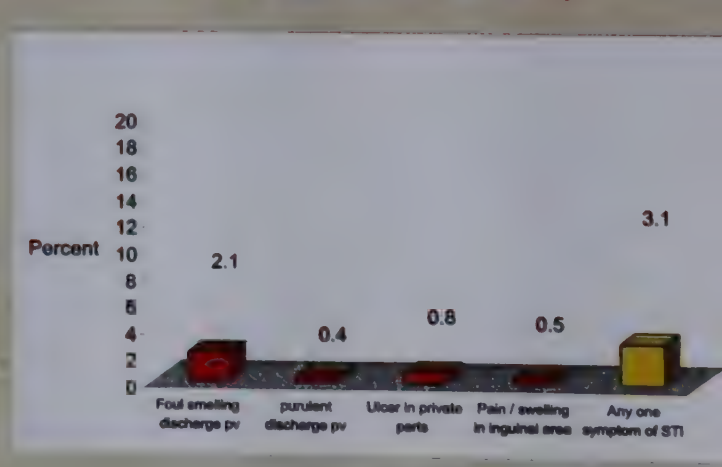
Prevalence Of Self Reported Symptoms of Reproductive Tract Infections (n=1936)



Percent MAGs Reported Symptoms of UTI (n=1936)



Percent of MAGs Reported STI Symptoms (n=1936)



Percent MAGs Reported Reproductive Morbidity - Summary

Variables	% (n=1936)	Range across districts
Prevalence of		
• Any one symptom of RTIs	33.5	21.7 – 49.8
• Any one symptom of UTIs	16.5	11.6 – 22.8
• Any one symptom of STIs	3.1	1.5 – 5.1

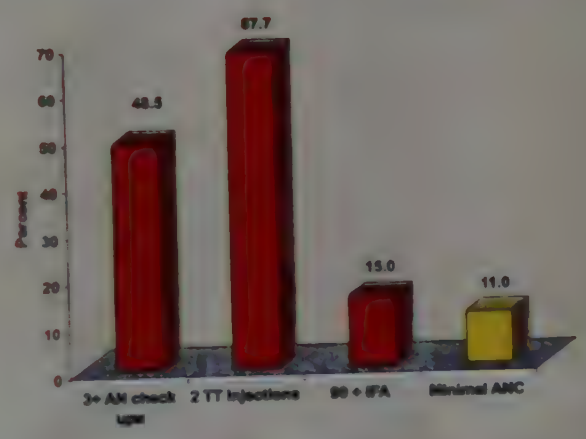
Percent MAGs Reporting Domestic Violence and Non-Consensual Sex

Variable	% (n = 1936)
Domestic violence (Physical violence by spouse in last one year)	7.5
Non consensual sex	10.3

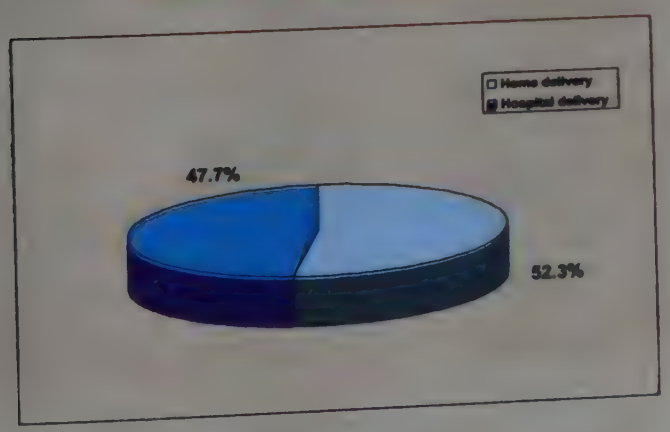
Percent MAGs Reporting Domestic Violence and Non-Consensual Sex

Variable	% (n = 1936)
Domestic violence (Physical violence by spouse in last one year)	7.5
Non consensual sex	10.3

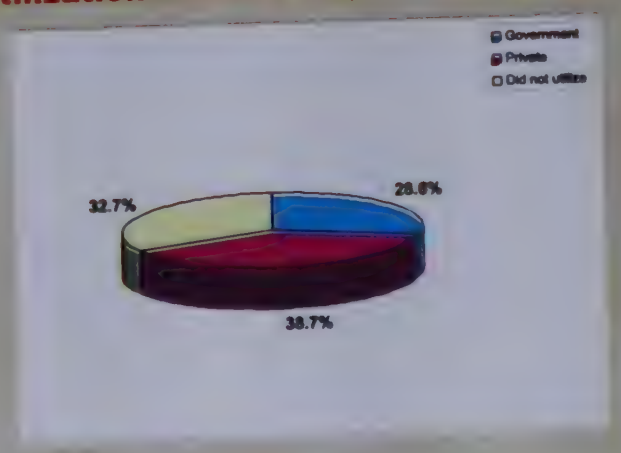
Antenatal Service Coverage (n=726)



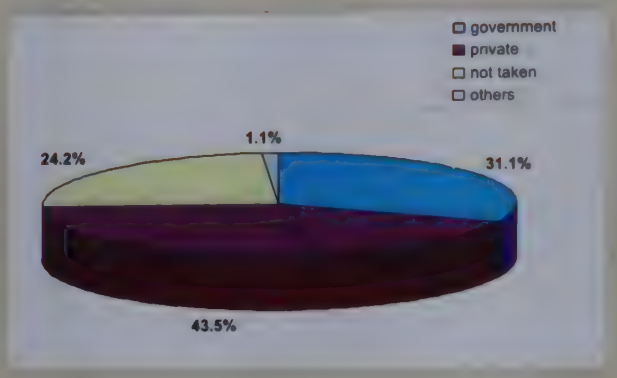
Place of Delivery (n=726)



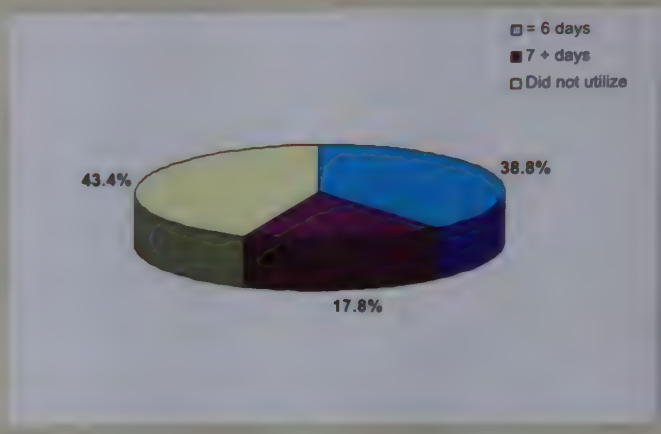
Percent MAGs Reported Treatment Utilization for AN Complications (n=336)



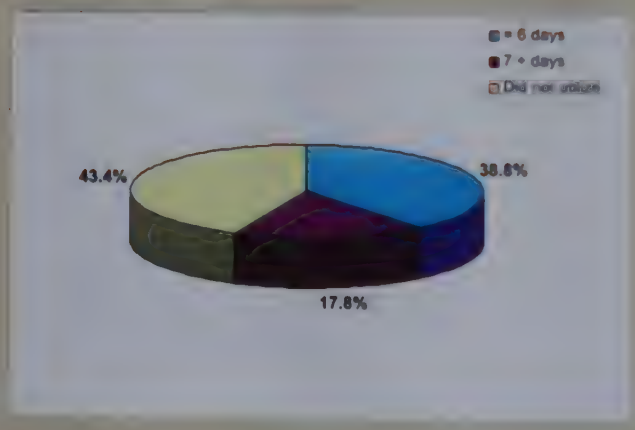
Percent MAGs Reported Treatment Utilization for Intra Natal Complications (n=363)



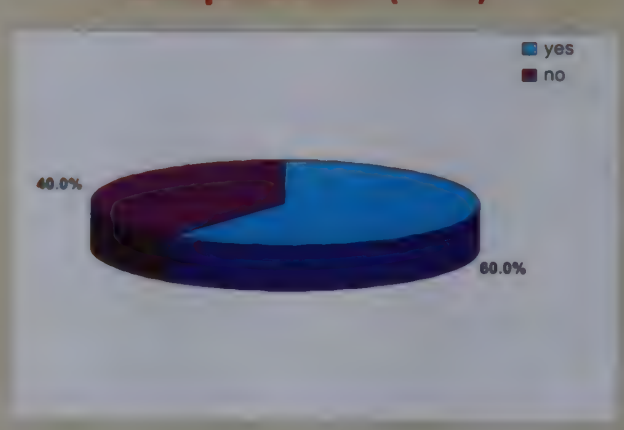
Percent MAGs Reported Treatment Utilization for Post Natal Complications (n=309)



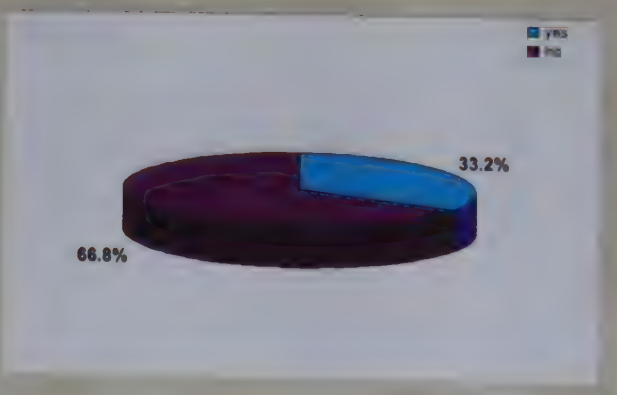
Percent MAGs Reported Treatment Utilization for Post Natal Complications (n=309)



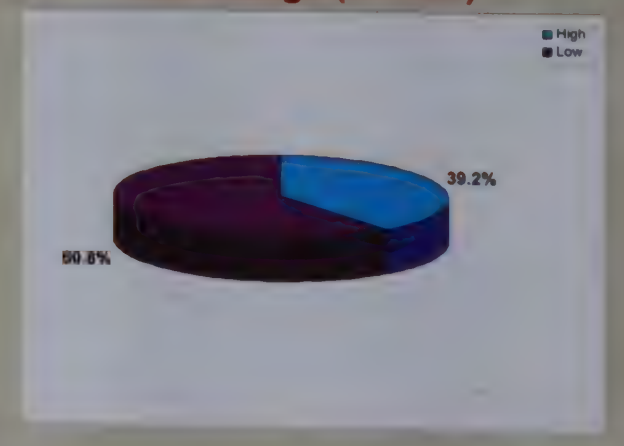
Percent MAGs Reported Treatment Utilization for Post Abortion Complications (n=50)



Percent MAGs Reported Treatment Utilization for RTIs (n=648)



Percent MAGs with Reproductive Health Knowledge (n= 1936)



High = 50% and above correct answers to ten questions regarding anaemia, contraception, RTI, early conception, maternal and neonatal health

Annexure-VI

Covariates of early age at first conception (= 17 years)

ariables /categories	Adjusted Odds	Confidence/intervals
egion		
Region 1 (Marathwada)	2.56 *	1.78 – 3.67
Region 3 (Nashik)	1.08	0.73 – 1.60
Region 2 (Vidarbha)	1.00	
ype of village		
Small	1.48 *	1.02 – 2.13
Medium	1.32	0.93 – 1.87
Large	1.00	
ducation of MAG		
Up to Primary	1.58 *	1.06 – 2.34
Middle	1.51 *	1.04 – 2.21
Secondary +	1.00	
ccupation of MAG		
Laborer	1.58 *	1.06 – 2.30
Non working	1.54 *	1.05 – 2.26
Farmer	1.00	
lusband's Education		
Up to Primary	1.76 *	1.09 – 2.84
Middle	1.40	0.86 – 2.26
Secondary	1.37	0.93 – 2.03
Higher Secondary	1.00	

Covariates of Early Age at First Conception (= 17years)

contd...

Variables /categories	Adjusted Odds	Confidence Intervals
Exposure to Mass Media		
• Low	1.44 *	1.05 – 1.98
• High	1.00	
Reported non consensual sex		
• Yes	1.69 *	1.00 – 1.96
• No	1.00	
Number of rooms		
• 3+	0.85	0.62-1.18
• = 2	1.00	

*N = 985 Log likelihood = -549.48139 Pseudo R^2 = 0.0809 *p<0.05*
Adjusted for region, type of village, education of the respondent, occupation of the respondent, husbands education, number of rooms, media exposure, non-consensual sex, interval between marriage & first conception

Covariates of Reported Symptoms of Maternal Morbidity (Intranatal and Postnatal)

Characteristics	Adjusted Odds	Confidence interval
Region		
• Region 1 (Marathwada)	1.72*	1.06 – 2.80
• Region 2 (Vidarbha)	1.42	0.85 – 2.35
• Region 3 (Nashik)	1.00	
Type of village		
• Large	1.63*	1.05 – 2.53
• Medium	0.95	0.61 – 1.47
• Small	1.00	
Anaemia during pregnancy	3.55*	2.35 – 5.34
• Yes	1.00	
• No		

Covariates of Reported Symptoms of Maternal Morbidity

Characteristics	Adjusted Odds	Confidence Interval
Reduced foetal movements during pregnancy		
• Yes	2.79*	1.16 – 6.67
• No	1.00	
Age at first conception		
• = 15	2.00*	1.15 – 3.48
• 16-19	1.00	

*N = 722 Log likelihood = -391.29807 Pseudo R^2 = 0.1621, *p<0.05*
Adjusted for education of MAG, husbands education, SES, type of family, religion, parity, consumption of IFA during pregnancy, TT injections during pregnancy, age at the time of delivery.

Covariates of Low Birth Weight Babies

Variables /categories	Adjusted Odds	Confidence Intervals
Age at marriage		
• Age at marriage = 15	2.22 *	1.15 – 4.28
• Age at marriage = 16	1.00	
Gestational term of delivery		
• Pre term	2.71 *	1.09 – 6.72
• Full term	1.00	
Order of Birth		
• First	2.39 *	1.04 – 5.51
• Second +	1.00	
Type of delivery		
• Normal	2.24*	1.15 – 4.37
• Instrumental	1.00	

*N = 429 Log likelihood = -232.38265 pseudo R^2 = 0.0755 * -p<0.05*
Adjusted for religion, village size, Age at the time of last del ivery, number of rooms, ante natal registration, consumption of IFA during pregnancy, frequency of meals in third trimester of pregnancy, ante natal complications, knowledge of RH, previous h istory of abortion, occupation of MAG, exposure to mass media, non – consensual sex, place of delivery, family type.

Covariates of Early Ante Natal Registration (within 12 weeks of pregnancy)

Variables /categories	Adjusted Odds	Confidence Intervals
Education of the MAG		
• Secondary +	1.84 *	1.19– 2.87
• Upto middle	1.81 *	1.23 – 2.66
• Nil	1.00	
Access to mass media		
• High	2.08 *	1.46– 2.97
• Low	1.00	
Region		
• Region 1 (Marathwada)	1.09	0.71-1.67
• Region 2 (Vidarbha)	1.40	0.89-2.22
• Region 3 (Nashik)	1.00	
Husband's education		
• 5-7	1.09	0.68-1.75
• 8-10	1.0	0.65-1.52
• 11+	1.34	0.78-2.29
• Up to 4	1.00	

Early Ante Natal Registration contd...

Variables /categories	Odds	Confidence intervals
Number of rooms		
• = 2	1.07	0.74-1.24
• 3 +	1.00	
Order of pregnancy		
• First	1.27	0.83-1.95
• Second+	1.00	
Age at marriage		
• 17+	1.02	0.67-1.53
• = 16	1.00	

*N = 726 Log likelihood = -463.99041 Pseudo R^2 = 0.0633 * -p < 0.05*

Adjusted for region, husbands education, family type, presence of mothers-in-law, number of rooms, knowledge of RH, birth order, age at marriage, age at fir st conception, interspousal communication, occupation, religion.

Covariates of MAGs who Delivered at Home

Variables /categories	Odds	Confidenc intervals
Region		
• Region 3 (Nashik)	1.91 *	1.23– 2.94
• Region 2 (Vidarbha)	1.33	0.89 – 1.98
• Region 1 (Marathwada)	1.00	
Knowledge of RH		
• Low	1.77 *	1.25 – 2.51
• High	1.00	
Antenatal registration		
• Not registered	2.25 *	1. 40 – 3.61
• Registered after 12 weeks	0.99	0.68 – 1.45
• Registered within 12 weeks	1.00	
Education of MAG		
• = 4	1.20	0.77-1.86
• 5-7	1.21	0.79-1.84
• 8+	1.00	

Covariates of MAGs who Delivered at Home contd....

Variables /categories	Odds	Confidence intervals
Education of husband		
• = 4	1.64	0.97-2.76
• 5-7	1.37	0.81-2.29
• 8-10	0.92	0.59-1.43
• 11+	1.00	
No. of rooms		
• = 2	1.20	0.83-1.74
• 3+	1.00	
Access to mass media		
• Low	1.14	0.80-1.62
• High	1.00	

*N = 726 Log likelihood = -455.80967 Pseudo R^2 = 0.0928 * -p< 0.05*

Adjusted for education of MAG, occupation, husbands education, family type, number of rooms, exposure to mass media, non-consensual sex, age at marriage.

Covariates of Reported Prevalence of Reproductive Tra Infections among Never Conceived MAGs

Variable/Characteristics	Odds	Confidence inter
Region		
• Region 1 (Marathwada)	1.86*	1.14 – 3.04
• Region 2 (Vidarbha)	1.33	0.80 – 2.19
• Region 3 (Nashik)	1.00	
Menstrual Hygiene		
• Poor	3.14*	1.66 – 5.93
• Good	1.00	
Reproductive health knowledge		
• High	1.77*	1.30 – 2.42
• Low	1.00	
General illness in last year		
• Yes	1.55*	1.15 – 2.09
• No	1.00	
Anaemia at time of survey		
• Yes	1.33*	1.00 – 1.78
• No	1.00	

*N=943 -2loglikelihood=-563.95 Pseudo R2 = 0.0612 *p<0.05*

Adjusted for village size, education of MAG, age at marriage, cu rrent age, occupation, dom violence, exposure to media , time since marriage, family type, non consensual sex, religio

Covariates of Reported Prevalence of Reproductive Tract Infections among Ever Conceived MAGs

Variable/Characteristics	Odds	Confidence interval
Current age of MAG (years)		
• =17	1.42*	1.001 – 2.01
• 18-19	1.00	
History of abortion		
• Yes	1.80*	1.08 – 3.01
• No	1.00	
Obstetric complications in last childbirth		
• Yes	1.68*	1.26 – 2.24
• No	1.00	

Covariates of RTI among Ever Conceived MAGs contd

Variable/Characteristics	Odds	Confidence inte
Workforce participation		
• Yes	1.44*	1.03 – 2.01
• No	1.00	
Knowledge of reproductive health		
• High	1.10	0.81-1.49
• Low	1.00	
Reported physical violence		
• Yes	1.61	0.99-2.60
• No	1.00	

*N=985 -2loglikelihood=604.86 Pseudo R2 = 0.0381 *p<0.05*

Adjusted for region, age at first conception, education of MAG, menstrual hygiene, domest violence, RH knowledge, exposure to media , non consensual sex

Covariates of Poor Inter Spousal Communication

Variable/Characteristics	Odds	Confidence interval
egion		
Region 1 (Marathwada)	1.63*	1.25– 2.14
Region 2 (Vidarbha)	1.31	0.99 – 1.73
Region 3 (Nashik)	1.00	
ducation of MAG		
Upto primary	1.90*	1.46 – 2.48
Middle	1.32 *	1.04 – 1.67
Secondary +	1.00	
Husband's education		
Upto primary	1.70*	1.26 – 2.24
Middle	1.65	1.21 – 2.24
Secondary	1.02	0.79 – 1.32
Higher secondary	1.00	
Non consensual sex		
Yes	2.67*	1.86 – 3.84
No	1.00	
Knowledge of RH		
Low	1.31*	1.06 -1.61
High	1.00	

Covariates of Poor Inter Spousal Communication

Variable/Characteristics	Odds	Confidence interval
Occupation of the respondent		
• Working	1.01	0.81-1.27
• Non Working	1.00	
Age of the respondents (years)		
• Below 17	1.09	0.88-1.35
• 18+	1.00	
Physical violence		
• Yes	1.42	0.96-2.10
• No	1.00	

*N=985 Log likelihood = -1253.1002 Pseudo R2 = 0.0628 *-p<0.05*
Adjusted for type of village, occupation, type of family, current age, physical violence

CONCLUSIONS

Covariates of Conception before 17 Years

MAGS significantly more likely to conceive before 17 years if

- Residing in Marathwada
- Resident of a small village
- Educated less than 8th class
- Working as a laborer
- With husband having primary or less education
- Having poor exposure to mass media
- Reporting non consensual sex
- From a low SES household

Covariates of Maternal Morbidity

MAGS significantly more likely to Experience Maternal Morbidity if

- Conceiving before 15 years
- Having anaemia during pregnancy
- Reporting history of reduced foetal movement during pregnancy
- residing in Marathwada
- living in a larger village

Covariates of Low Birth Weight (LBW)

Low birth weight babies significantly more likely in

- MAGs getting married before 15 years
- In first order births
- With history of pre term delivery
- In normal compared to instrumental deliveries

Covariates of Early ANC Registration

Early registration for ANC significantly more likely in

- First pregnancies
- Educated MAGs
- With higher exposure to mass media
- Having an educated husband

Covariates of Home Delivery

Home deliveries significantly morel likely in

- Nashik Region
- MAGs with poor knowledge of Reproductive Health
- Not registered for ANC
- Education less than 4th class
- Where husband's education is less than 4th class.
- In low SES households
- Having poor exposure to MASS media

Covariates of RTI among MAGs who have neve conceived

Significantly higher likelihood of having RTI in a MAG has not conceived if she is

- Residing in Marathwada
- Has poor menstrual hygiene
- Has history of general illness or anemia

Covariates of RTI among MAGs who have never conceived

Significantly higher likelihood of having RTI in a MAG who has not conceived if she is

- Residing in Marathwada
- Has poor menstrual hygiene
- Has history of general illness or anemia

Covariates of poor inter spousal communication

Poor Inter-spousal Communication significantly more likely

- MAG is resident of Marathwada.
- Has a low educational status
- Works outside the home
- Has a husband with education less than 8th class.
- Reports Non consensual sex & physical violence.
- Has poor RH knowledge

Annexure-VII

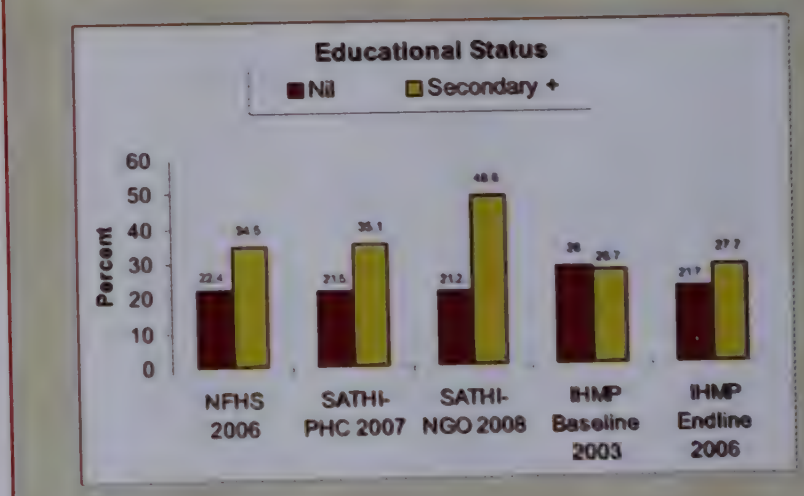
Evidence Base

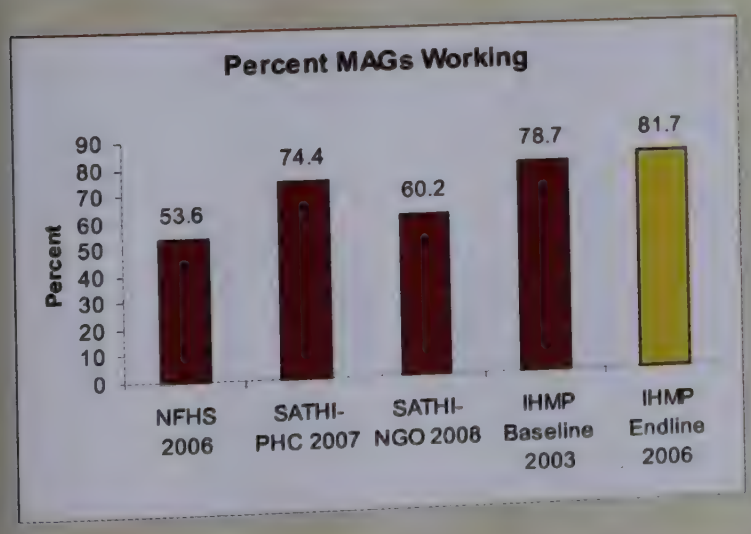
For Efficacy of Intervention in the IHMP Pilot Study

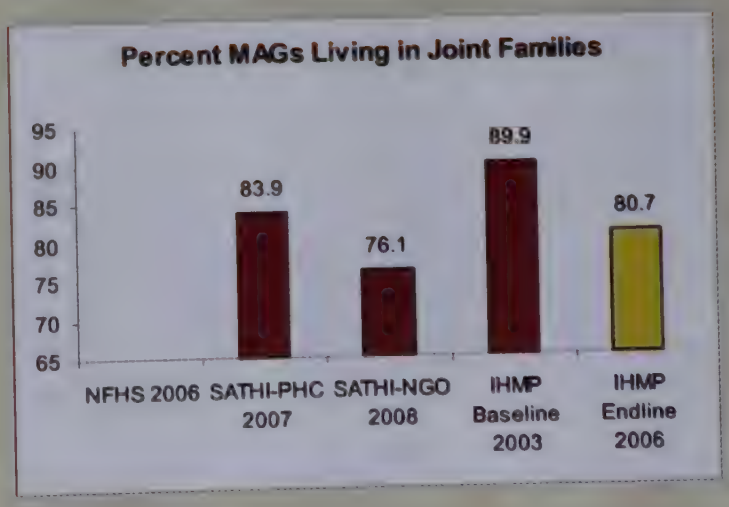
Objective of Presentation

- To compare the Reproductive Health Status of Married Adolescent Girls (MAGs) across various data sets and regions of Maharashtra.
- To demonstrate the efficacy of the pilot intervention.

Socio- Demographic Characteristics

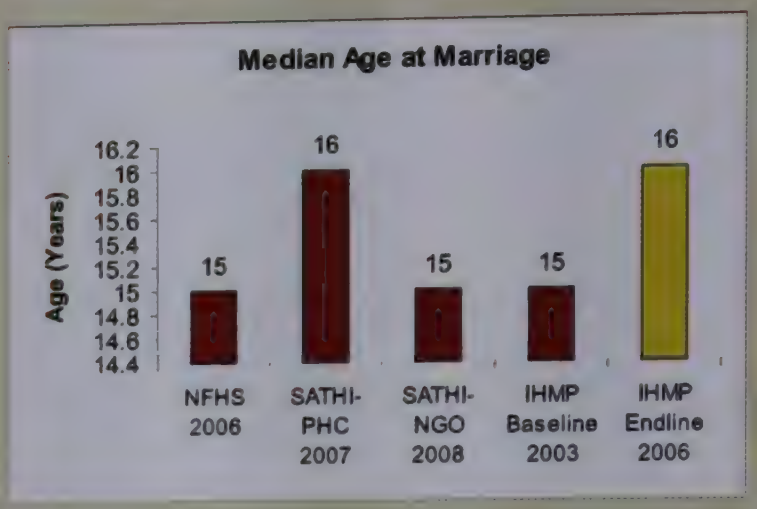


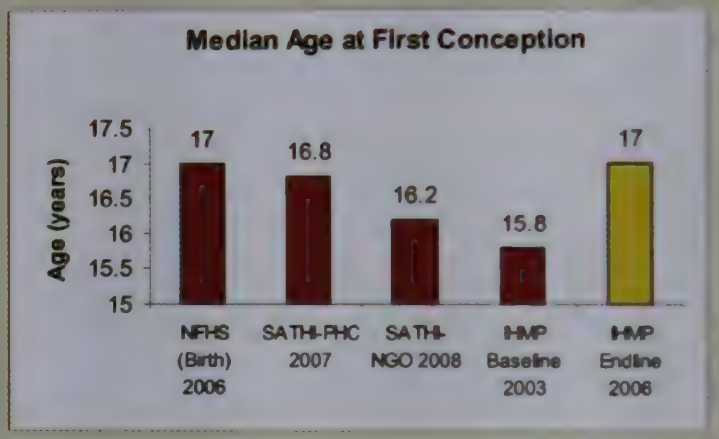


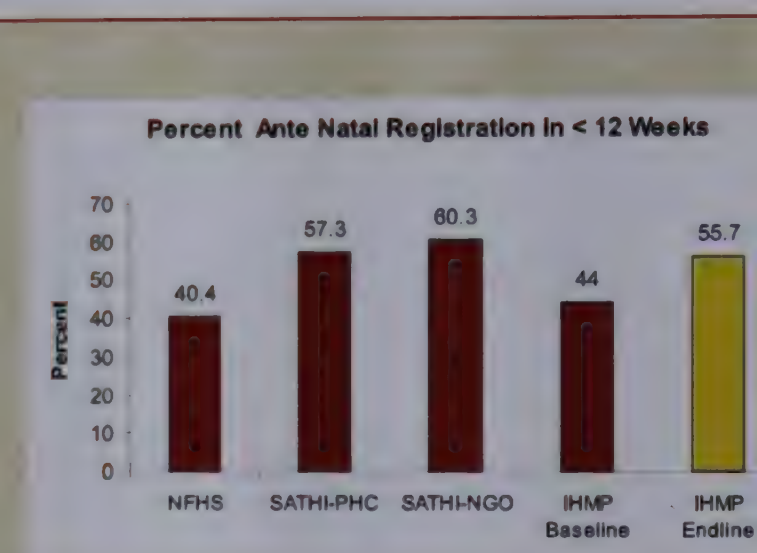


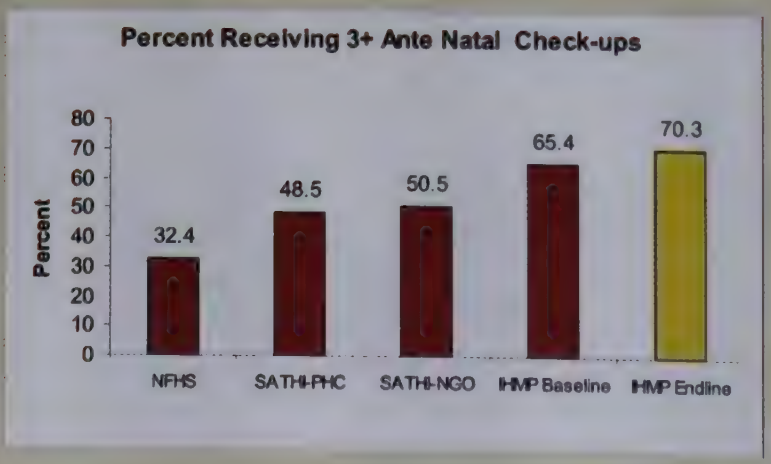
Reproductive Health

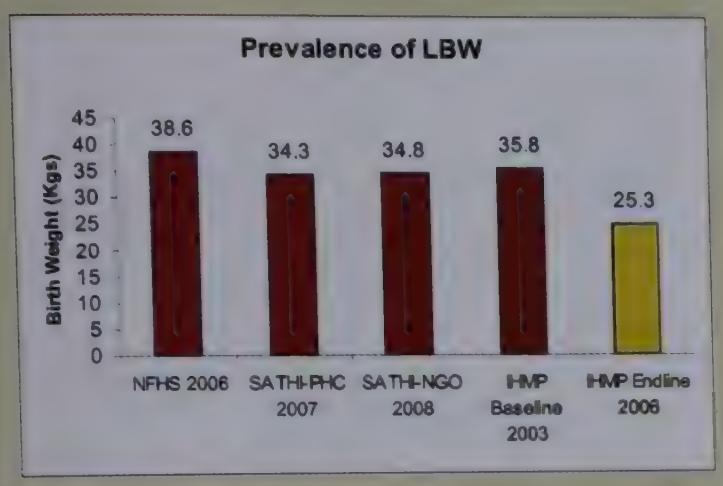
of Married Adolescent Girls



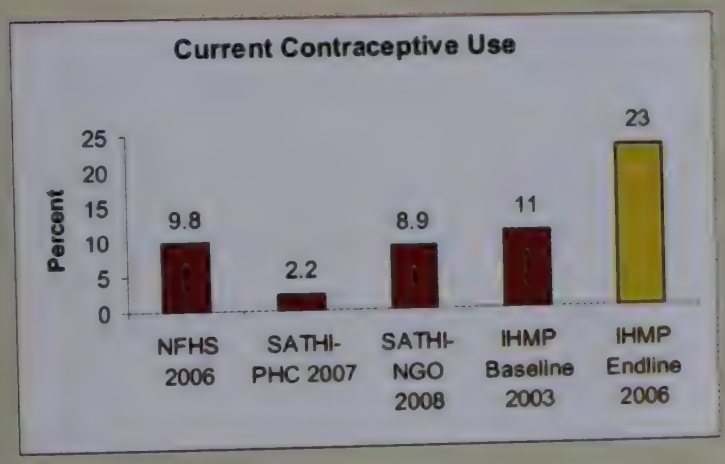


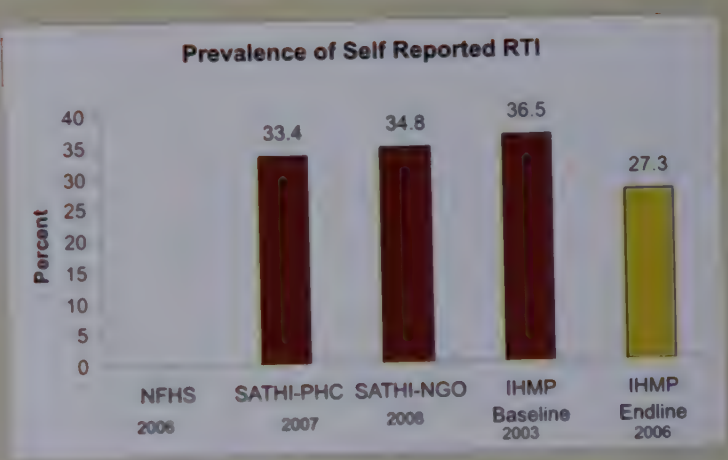


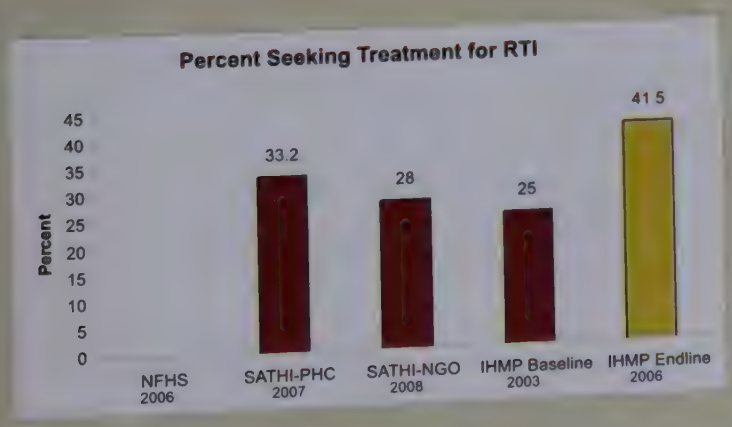


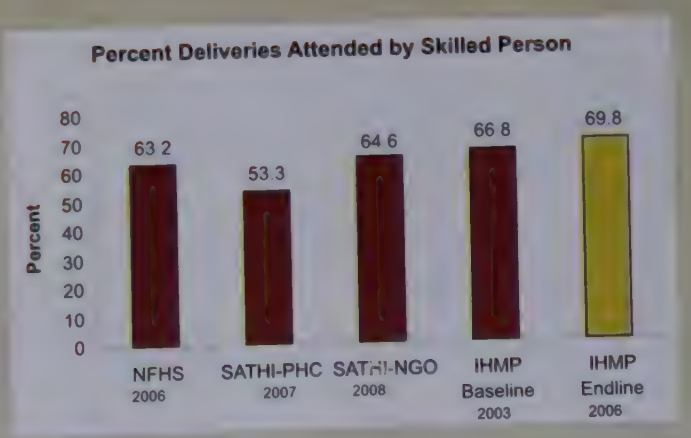

Prevalence of LBW
Birth Weight (Kgs)
45
40
35
30
25
20
15
10
5
0
38.6
34.3
34.8
35.8
25.3
NFHS 2006
SATHI-PHC 2007
SATHI-NGO 2008
IHMP Baseline 2003
IHMP Endline 2006


Pregnancy Wastage
Percent
16
14
12
10
8
6
4
2
0
7.8
9.5
13.7
10.7
6.9
NFHS
SATHI-PHC
SATHI-NGO
IHMP Baseline
IHMP Endline


Current Contraceptive Use
Percent
25
20
15
10
5
0
9.8
2.2
8.9
11
23
NFHS 2006
SATHI-PHC 2007
SATHI-NGO 2008
IHMP Baseline 2003
IHMP Endline 2006


Prevalence of Self Reported RTI
Percent
40
35
30
25
20
15
10
5
0
33.4
34.8
36.5
27.3
NFHS 2006
SATHI-PHC 2007
SATHI-NGO 2008
IHMP Baseline 2003
IHMP Endline 2006


Percent Seeking Treatment for RTI
Percent
45
40
35
30
25
20
15
10
5
0
33.2
28
25
41.5
NFHS 2006
SATHI-PHC 2007
SATHI-NGO 2008
IHMP Baseline 2003
IHMP Endline 2006


Percent Deliveries Attended by Skilled Person
Percent
80
70
60
50
40
30
20
10
0
63.2
53.3
64.6
66.8
69.8
NFHS 2006
SATHI-PHC 2007
SATHI-NGO 2008
IHMP Baseline 2003
IHMP Endline 2006

Policy Implications

General

- Identify High Risk Districts and Focus Resources in these areas.
- Focus on Adolescents with less or no education.
- Focus on Adolescents from the lower economic strata.

Behaviour Change Communication

- Develop BCC Material appropriate for Illiterate & Semi Literate Audiences.
- BCC to Unmarried Young Men to & their Parents to encourage marriage with girls older than 18 yrs.
  - Change the Social Norm.
  - Delay Age at Marriage.

Behaviour Change Communicatio

- Ensure Early Registration of Marriages in orde to:
  - Identify and Enroll Married Adolescent Girls and the Husbands
  - Provide BCC to Marital Families to create Conducive Environment for MAGs.
  - Provide BCC/ counseling to Young Couples to Increase Contraceptive Use to Delay Age at First Conception.
  - Provide Counseling and Gender Sensitization to Husbands to Decrease Non Consensual Sex & Violence against Women.

Behaviour Change Communication

- BCC to promote Menstrual Hygiene
- BCC to promote Early Registration for ANC.
- BCC for Institutional Delivery Particularly for the First Delivery.
- BCC for Increasing Utilization of RH Services

Behaviour Change Communicatio

- BCC to Promote Inter-Spousal & Intra-Family Communication.
- Increase Use of Mass Media and Complement it with Inter Personal Communication.

Behaviour Change Communication

- BCC to Promote Inter-Spousal & Intra-Family Communication.
- Increase Use of Mass Media and Complement it with Inter Personal Communication.

Service Provision

- Ensure Early Detection of Spontaneous Abortions and Referral for Post Abortion Care (PAC).
- Decentralise PAC Services to Rural Hospitals (RH).
- Build the capacities of Staff at RH to provide PAC.

Policy Formulation

- Fill Gaps in the Existing Policies on ARSH
- Inclusion of Married Adolescents in the policy framework of ARSH

Annexure-VIII

The Policy Scenario

A Review of Key Policy Documents For Adolescent Health

National Population Policy - 2000

- ARSH one of the twelve strategic themes
- Recognizes that adolescents have special needs - not met in the past
- Emphasis on promoting delayed age at marriage & child bearing, RH services & nutrition especially in rural areas, adolescent education on SRH

NPP 2000 – Operational Strategies

- Ensure access to information, counseling and services, that are affordable and accessible. Emphasize spacing.
- Provide package of nutritional services available under the ICDS programme.
- Enforce the Child Marriage Restraint Act, 1976, to reduce the incidence of teenage pregnancies.
- Provide integrated intervention in pockets with unmet needs (urban slums, remote rural areas, border districts and among tribal populations).

National Youth Policy - 2003

- Covers age group of 13-35 yrs with broad sub-groups of 13-19 yrs & 20-35 yrs
- Specific objective related to health
  - to facilitate access to health information and services, promote a social environment which strongly inhibits the use of drugs and other forms of substance abuse, wards off disease (like HIV/AIDS), ensures measures for de-addiction and mainstreaming of the affected persons and enhances the availability of sports and recreational facilities as constructive outlets for the abundant energy of the youth

NYP - 2003

- Thrust areas include adequate nutrition, gender justice, access to adequate health services
- Health & Family Welfare identified as one of the key sectors of youth concern
- Population education includes promotion of responsible sexual behavior, correct age at marriage and first conception, spacing and limiting family size

NYP - 2003

Strategies

- Government , Youth Organisations and NGOs, would promote the establishment of Youth Health Associations
- Programmes to sensitize medical and para-medic students on the issues of health and hygiene and in the IEC component of various disease control programs instituted
- "Peer Education" will be an important element in promoting health services.

NRHM/RCH II - Issues

- **Influence of socio-cultural environment** Half of Indian women (20-24 years) have married by the age of 18 years and almost one-quarter by 15 years.
- **Low utilization of services** Lack of,awareness, myths and misconceptions, absence of support from family, adults and service providers
- **Limited access to sexual and reproductive health services** . Newly married women, receive no special attention from health providers despite the fact that they have limited e among

RCH II – ARSH Strategies

- Increase availability of representative data on ARSH (age and gender disagg.).
- Community mobilization and BCC for adolescent friendly SRH services
- Improve provision and utilization of services by specifically addressing barriers that exist at the two levels

RCH II – Actions Proposed

- Sub-centre, PHC, CHC and district hospital to deliver services through outreach, routine OPD, and a dedicated time
- Participation of peripheral functionaries of other depts, (AWW or youth coordinator), for organizing outreach services

RCH II – ActionsProposed

- At sub-centre level - proactively register newly married couples and organize separate meetings.
- Once a month clinic for newly married adolescents and unmarried girls.
- Routine OPD for married adolescents at PHC and CHC levels,

RCH II – Key Interventions

- **Orientation of Service Providers:** modules developed
- **Service Delivery Protocols** : developed
- **Environment Building Activities:** aimed at district officials, panchayat members, women's groups and the civil society

RCH II – Outcome Indicators

- Teenage Pregnancy rate
- Prevalence of RTIs/STIs among 15-19 years
- Use of Condoms during last sex among 15-24 years
- Mean age at marriage
- No of maternal deaths among teenage mothers
- Proportion of HIV positives among 10-19 yrs age group

Eleventh Five Year Plan (2007–2012) Social Sector

- Recognizes public health challenges for adolescents (pregnancy, excess risk of maternal and infant mortality, STI, RTI, rising incidence of HIV and the inter-generational cycle of under-nutrition and ill health)
- Promotes advocacy for delay in age at marriage and optimum health and nutrition interventions during pregnancy.
- Plan includes provision of knowledge and skills to providers, material development and adol. friendly services at PHCs, CHCs

NRHM – State PIPs

Common Strategies/activities

- Creation of an enabling environment
- Capacity building of service providers
- Operationalizing Adolescent friendly health services (AFHS) – a major focus
- IEC/BCC on ARSH, AFHS
- Establishing linkages to reach in school & out of school adolescents

Discussion Points

- Do current policies adequately address the needs of married adolescents?
- Should there be a separate policy to have a greater emphasis on implementation?
- Are the policies effectively translated in PIPs?
- Are the interventions proposed sufficient to address the needs of married adolescents? Any Gaps?

Discussion Points

- Is implementation a problem? Solutions if it is?
- Possible avenues to scale up the Maharashtra MAGs model
- Any specific geographic focus to begin with?
- Next Steps

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